VDOİHİ

Bağımlı ve Bir Bağımsız Olasılıklı Farklı Dizilimsiz Bağımlı Durumlu Simetrinin İlk ve Herhangi İki Durumunun Bulunabileceği Olaylara Göre Toplam Düzgün Simetrik Olasılık

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İsmail YILMAZ

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VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılık Cilt 2.3.1.2.5.1.1.2

İsmail YILMAZ

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1. Bağımlı durumlu simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılık

Dili: Türkçe + Matematik Mantık

Türkiye Cumhuriyeti Devleti
Kuruluşunun
100.Yılı Anısına

M. Atatürk

d

Yazar Hakkında

İsmail YILMAZ; Hamzabey Köyü, Yeniçağa, Bolu'da 1973 yılında doğdu. İlkokulu köyünde tamamladıktan sonra, ortaokulu Yeniçağa ortaokulunda tamamladı. Liseyi Ankara Ömer Seyfettin ve Gazi Çiftliği Liselerinde okudu. Lisans eğitimini Çukurova Üniversitesi Fen Edebiyat Fakültesi Fizik bölümünde, yüksek lisans eğitimini Sakarya Üniversitesi Fen Bilimleri Enstitüsü Fizik Anabilim Dalında ve doktora eğitimini Gazi Üniversitesi Eğitim Bilimleri Enstitüsü Fen Bilgisi Eğitimi Anabilim Dalında tamamladı. Fen Bilgisi Eğitiminde; Newton'un hareket yasaları, elektrik ve manyetizmanın prosedürel ve deklaritif bilgi yapılarıyla birlikte matematik mantık yapıları üzerine çalışmalar yapmıştır. Yazarın farklı alanlarda yapmış olduğu çalışmalar arasında ölçme ve değerlendirmeye yönelik çalışmaları da mevcuttur.

VDOİHİ

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- ✓ Makinaların insan gibi düşünebilmesini, karar verebilmesini ve davranabilmesini sağlayacak gerçek yapay zekayla ilişkilendirilmiştir.
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- ✓ Bilgi merkezli değerlendirme yöntemidir.

Sanırım bilgi ve teknolojideki kaderimiz veriyle ilişkilendirilmiş.

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GÜLDÜNYA

Simge ve Kısaltmalar

n: olay sayısı

$\boldsymbol{n}$: bağımlı olay sayısı

$\mathbb{m}$: bağımsız olay sayısı

ι: bağımsız durum sayısı

I: simetrinin bağımsız durum sayısı

$\mathbb{l}$: simetrinin bağımlı durumlarından önce bulunan bağımsız durum sayısı

$\boldsymbol{I}$: simetrinin bağımlı durumlarından sonra bulunan bağımsız durum sayısı

$\mathbb{k}$: simetrinin bağımlı durumları arasındaki bağımsız durumların sayısı

k: dağılımın başladığı bağımlı durumun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası

$\boldsymbol{l}$: ilgilenilen bağımlı durumun, bağımlı olasılıklı farklı dizilimsiz dağılımlarındaki sırası

$_{\boldsymbol{i}}\boldsymbol{l}$: simetrinin ilk bağımlı durumunun, bağımlı olasılık farklı dizilimsiz dağılımın son olayı için sırası. Simetrinin sonuncu bağımlı olayındaki durumun, bağımlı olasılık farklı dizilimsiz dağılımlarındaki sırası

$\boldsymbol{l_i}$: simetrinin son bağımlı durumunun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası. Simetrinin birinci bağımlı olayındaki durumun, bağımlı olasılık farklı dizilimsiz dağılımlarındaki sırası

$\boldsymbol{l_s}$: simetrinin ilk bağımlı durumunun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası. Simetrinin sonuncu bağımlı olayındaki durumun, bağımlı olasılık farklı dizilimsiz dağılımlarındaki sırası

$\boldsymbol{l_{ik}}$: simetrinin aranacağı durumdan önce bulunan bağımlı durumun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası veya simetrinin iki bağımlı durumu arasında bağımsız durum bulunduğunda, bağımsız durumdan önceki bağımlı durumun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası

$\boldsymbol{l_{sa}}$: simetrinin aranacağı bağımlı durumunun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası. Simetrinin aranacağı bağımlı olayındaki durumun, bağımlı olasılık farklı dizilimsiz dağılımlarındaki sırası

j: son olaydan/(alt olay) ilk olaya doğru aranılan olayın sırası

j_i: simetrinin son bağımlı durumunun, bağımlı olasılıklı dağılımlarda bulunabileceği olayların, son olaydan itibaren sırası

j_{sa}^{i}: simetriyi oluşturan bağımlı durumlar arasında simetrinin son bağımlı durumunun bulunduğu olayın, simetrinin son olayından itibaren sırası $\left(j_{sa}^{i} = s\right)$

j_{ik}: simetrinin ikinci olayındaki durumun, gelebileceği olasılık dağılımlarındaki olayın sırası (son olaydan ilk olaya doğru) veya simetride, simetrinin aranacağı durumdan önce bulunan bağımlı durumun, bağımlı olasılıklı dağılımlarda bulunabileceği olayların, son olaydan itibaren sırası veya simetrinin iki bağımlı

durum arasında bağımsız durumun bulunduğunda bağımsız durumdan önceki bağımlı durumun bağımlı olasılıklı dağılımlarda bulunabileceği olayların son olaydan itibaren sırası

j_{sa}^{ik}: j_{ik}'da bulunan durumun simetriyi oluşturan bağımlı durumlar arasında bulunduğu olayın son olaydan itibaren sırası

$j_{X_{ik}}$: simetrinin ikinci olayındaki durumun, olasılık dağılımlarının son olaydan itibaren bulunabileceği olayın sırası

j_s: simetrinin ilk bağımlı durumunun, bağımlı olasılıklı dağılımlarda bulunabileceği olayların, son olaydan itibaren sırası

j_{sa}^{s}: simetriyi oluşturan bağımlı durumlar arasında simetrinin ilk bağımlı durumunun bulunduğu olayın, simetrinin son olayından itibaren sırası ($j_{sa}^{s} = 1$)

j_{sa}: simetriyi oluşturan bağımlı durumlar arasında simetrinin aranacağı durumun bulunduğu olayın, simetrinin son olayından itibaren sırası

j^{sa}: j_{sa}'da bulunan durumun bağımlı olasılıklı dağılımda bulunduğu olayın son olaydan itibaren sırası

D: bağımlı durum sayısı

D_i: olayın durum sayısı

s: simetrinin bağımlı durum sayısı

$\boldsymbol{s}$: simetrik durum sayısı. Simetrinin bağımlı ve bağımsız durum sayısı

m: olasılık

M: olasılık dağılım sayısı

U: uyum eşitliği

u: uyum derecesi

s_i: olasılık dağılımı

${}_{fz}S_{j_i}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin son durumunun bulunabileceği olaylara göre simetrik olasılık

${}_{fz}S_{j_i,0}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin son durumunun bulunabileceği olaylara göre simetrik olasılık

${}_{fz}S_{j_i,D}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin son durumunun bulunabileceği olaylara göre simetrik olasılık

${}_{fz}^{0}S_{j_i}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız veya bağımlı-bağımsız durumlu simetrinin son durumunun bulunabileceği olaylara göre simetrik olasılık

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durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı toplam düzgün olmayan simetrik olasılık

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bağımsız-bağımlı durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı toplam düzgün olmayan simetrik olasılık

${}_{fz}^{0}S_{\Rightarrow j_s,\Rightarrow j_{ik},j^{sa},j_i}^{DOSD}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız veya bağımlı-bağımsız veya bağımsız-bağımsız durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı toplam düzgün olmayan simetrik olasılık

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E2

BAĞIMLI ve BİR BAĞIMSIZ OLASILIKLI FARKLI DİZİLİMSİZ DAĞILIMLAR

Bağımlı ve Bir Bağımsız Olasılıklı Farklı Dizilimsiz Dağılımlar

- **Simetrik Olasılık**
- **Toplam Düzgün Simetrik Olasılık**
- **Toplam Düzgün Olmayan Simetrik Olasılık**
- **İlk Simetrik Olasılık**
- **İlk Düzgün Simetrik Olasılık**
- **İlk Düzgün Olmayan Simetrik Olasılık**
- **Tek Kalan Simetrik Olasılık**
- **Tek Kalan Düzgün Simetrik Olasılık**
- **Tek Kalan Düzgün Olmayan Simetrik Olasılık**
- **Kalan Simetrik Olasılık**
- **Kalan Düzgün Simetrik Olasılık**
- **Kalan Düzgün Olmayan Simetrik Olasılık**

Bağımlı dağılım ve bir bağımsız olasılıklı durumla oluşturulabilen dağılımlara ve bağımlı olasılıklı dağılımların kendi olay sayılarından (bağımlı olay sayısı) büyük olanlara (bağımlı olay sayısı) dağılımıyla bağımlı ve bir bağımsız olasılıklı dağılımlar denir. Bağımlı dağılım farklı dizilimsiz dağılımlara uygulandığında, bu dağılımlara bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlar denir. Bağımlı ve bir bağımsız olasılıklı dağılımlar; bağımlı dağılımlara, bağımsız durumlar ilk paydan dağıtılmaya başlanarak tabloları elde edilir. Bu bölümde verilen eşitlikler, bu yöntemle elde edilen kurallı tablolara göre verilmektedir. Farklı dizilimsiz dağılımlarda durumların küçükten-büyüğe sıralamasıyla elde edilebilen kurallı tablolar kullanılmaktadır. Farklı dizilimsiz dağılımlarda durumların küçükten-büyüğe sıralama için verilen eşitliklerde kullanılan durum sayılarının düzenlenmesiyle, büyükten-küçüğe sıralama durumlarının eşitlikleri elde edilebilir.

Farklı dizilimsiz dağılımlar, dağılımın ilk durumuyla başlayan (bunun yerine farklı dizilimli dağılımlarda simetrinin ilk durumuyla başlayan dağılımlar), dağılımın ilk durumu hariçtinde dağılımın herhangi bir durumuyla başlayan dağılımlar (bunun yerine farklı dizilimli dağılımlarda simetride bulunmayan bir durumla başlayan dağılımlar) ve dağılımın ilk durumu simetrik olarak dağılımının başladığı farklı ikinci durumla başlayıp simetrinin ilk durumuyla başlayan dağılımların sonuna kadar olan dağılımlarda (bunun yerine farklı dizilimli dağılımlarda simetride bulunmayan diğer durumlarla başlayan dağılımlar) simetrik, düzgün simetrik, düzgün olmayan simetrik v.d. incelenir. Bağımlı dağılımlardaki incelenen başlıklar, bağımlı ve bir bağımsız olasılıklı dağılımlarda, bağımsız durumla ve bağımlı durumla başlayan dağılımlar olarak da incelenir.

GÜDÜMYA

Bağımlı dağılımlar; a) olasılık dağılımlardaki simetrik, (toplam) düzgün simetrik ve (toplam) düzgün olmayan simetrik b) ilk simetrik, ilk düzgün simetrik ve ilk düzgün olmayan simetrik c) tek kalan simetrik, tek kalan düzgün simetrik ve tek kalan düzgün olmayan simetrik ve d) kalan simetrik, kalan düzgün simetrik ve kalan düzgün olmayan simetrik olasılıklar olarak incelendiğinden, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda bu başlıklarla incelenmekle birlikte, bu simetrik olasılıkların bağımsız durumla başlayan ve bağımlı durumlarıyla başlayan dağılımlara göre de tanım eşitlikleri verilmektedir.

Farklı dizilimsiz dağılımlarda simetrinin durumlarının olasılık dağılımındaki sıra simetrik olasılıkları etkilediğinden, bu bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımları da etkiler. Bu nedenle bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda, simetrinin durumlarının bulunabileceği olaylara göre simetrik olasılık eşitlikleri, simetrinin durumlarının olasılık dağılımındaki sıralamalarına göre ayrı ayrı verilecektir. Bu eşitliklerin elde edilmesinde bağımlı olasılıklı farklı dizilimsiz dağılımlarda simetrinin durumların bulunabileceği olaylara göre çıkarılan eşitlikler kullanılacaktır. Bu eşitlikler, bir bağımlı ve bir bağımsız olasılıklı dağılımlar için VDO Cilt 1'de çıkarılan eşitliklerle birleştirilerek, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlar için yeni eşitlikleri elde edilecektir. Eşitlikleri adlandırılmasında bağımlı olasılıklı farklı dizilimsiz dağılımlarda kullanılan adlandırmalar kullanılacaktır. Bu adların başına simetrinin bağımlı ve bağımsız durumlarına göre ve dağılımın bağımsız veya bağımlı durumla başlamasına göre "Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı/bağımsız-bağımlı/bağımlı-bir bağımsız/bağımlı-bağımsız/bağımsız-bağımsız durumlu /bağımsız/bağımlı" kelimeleri getirilerek, simetrinin bağımlı durumlarının bulunabileceği olaylara göre bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz adları elde edilecektir. Simetriden seçilen durumların bulunabileceği olaylara göre simetrik, düzgün simetrik veya düzgün olmayan simetrik olasılık için birden fazla eşitlik kullanılması durumunda gerekmedikçe yeni tanımlama yapılmayacaktır.

Simetrinin durumlarının bağımlı olasılık farklı dizilimsiz dağılımlarındaki sırasına göre verilen eşitliklerdeki toplam alma sınır değerleri, simetrinin küçükten-büyüğe sıralanan dağılımlarına göre verildiğinden bu dağılımlarda da aynı sıralama kullanılmaya devam edilecektir. Bağımlı olasılıklı farklı dizilimsiz dağılımlarda olduğu gibi bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda da aynı eşitliklerde simetrinin durum sayıları düzenlenerek büyükten küçüğe sıralanan dağılımlar için de simetrik olasılık eşitlikleri elde edilir.

Bu bölümde bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda, simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılığın eşitlikleri verilmektedir.

GÜLDÜNYA

SİMETRİDEN SEÇİLEN ÜÇ DURUMA GÖRE TOPLAM DÜZGÜN SİMETRİK OLASILIK

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$\boldsymbol{l_{sa}} > D + \boldsymbol{l_{ik}} + j_{sa} - \boldsymbol{n} - j_{sa}^{ik} \wedge \boldsymbol{l_i} > D + \boldsymbol{l_{sa}} + s - \boldsymbol{n} - j_{sa}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$\boldsymbol{l_{ik}} > D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1 \wedge \boldsymbol{l_i} > D + \boldsymbol{l_{sa}} + s - \boldsymbol{n} - j_{sa})$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} +$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge$

$\boldsymbol{l_{sa}} > D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1 \wedge \boldsymbol{l_i} > D + \boldsymbol{l_{sa}} + s - \boldsymbol{n} - j_{sa}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_i} > D + \boldsymbol{l_{sa}} + s - \boldsymbol{n} - 1)\big) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}}^{DSD} =$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s \wedge \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1) \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{(\boldsymbol{l_i} + j_{sa} - k - s + 1)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa}^{s}\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$

$\mathbb{k}_z:z=1)\big)$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}\sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D)}^{(\boldsymbol{l_{sa}}-k+1)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}-j_{sa}-s=$

$\left((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s \geq 3 \wedge \boldsymbol{s}=$

$(D \geq \boldsymbol{n} < n \wedge I=$

$j_{sa} \leq j_{sa}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}\right\} \wedge$

$s \geq 4 \wedge$

$\mathbb{k}_z: z=1\Big) \Rightarrow$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\ \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

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$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{(j^{sa}=\boldsymbol{l_{ik}}+\boldsymbol{n}+j_{sa}-D-j_{sa}^{ik})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_{}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+}^{(\ )} -j^{sa}-\mathbb{k})$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s\right.}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s\right.} \cdot$$

$$\frac{(\boldsymbol{l_s}-1)!}{k+} \cdot$$

$$\frac{(D-)!}{(D+j^{sa}+s-\boldsymbol{n}-\quad-j_{sa})!\quad} \cdot$$

$$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$$

$$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+ \quad -j_{ik} \leq \quad +j_{sa}^{ik}- \quad \wedge$$

$$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} \quad -s \wedge$$

$$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}- \quad =\boldsymbol{l_{ik}} \wedge \boldsymbol{l} \quad j_{sa}-s=\boldsymbol{l_{sa}} \wedge$$

$$\left((D \quad <n \wedge I= \quad =0 \wedge\right.$$

$$j_{sa} \leq j_{sa}^{i}-1 \wedge \quad =j_{sa} \quad 1 \wedge j_{sa}^{s} \leq \quad -1 \wedge$$

$$\boldsymbol{s}: \{j \quad \cdots, j_{sa}^{ik}, j_{sa}, \cdots \quad\} \wedge$$

$$s>3 \wedge \boldsymbol{s} \quad s) \vee$$

$$(D \geq \quad <n \wedge I \quad 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} \quad \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$$

$$\{j_{sa}^{s} \quad _{sa}^{t}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$$

$$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$$

$$\mathbb{k}_z: z=1\big) \Rightarrow$$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}-j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+j^{ik}_{sa}-j_{sa}} \sum_{(j^{sa}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}-D-)}^{(\boldsymbol{l_s}+j_{sa}-k)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\ \mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{(n_i + j_s \quad - s - \quad - j^s_{sa})!}{(n_i - \boldsymbol{n} \quad)! \cdot (\boldsymbol{n} \quad i_{\cdot} + j_{sa} \quad - j^s_{sa})!} \cdot
$$

$$
\frac{\quad - k - 1)!}{- j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \quad)!}{(D \quad a + s - \quad - \boldsymbol{l_i} - \quad)! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} \quad \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{s} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + \quad - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \quad \boldsymbol{n} < n \wedge I = \quad = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} \quad 1 \wedge j^{ik}_{sa} = j_{sa} \quad - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s} \quad , j^{ik}_{sa}, j_{sa}, \quad , j_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = \quad) \vee$

$\quad > \boldsymbol{n} \quad n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j^{ik}_{sa}+1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + j^{ik}_{sa} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{(\boldsymbol{l_{sa}} - k + 1)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}} \sum_{(j_s + 1)}^{n}$$

$$\sum_{n_{ik}} \sum_{(n_{sa} = \quad j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{(n_i + j^{ik}_{sa} - s - 1)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{ik} - j_{ik} - s - j^{s}_{sa})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + \quad - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad ^{sa} \leq \boldsymbol{n} \quad _{sa} - s$

$\boldsymbol{l_{ik}} \quad ^{ik} + 1 = \boldsymbol{l_s} \wedge \quad + j^{ik}_{sa} \quad _{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \quad - 1 \wedge j_{sa} \quad j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j \quad j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$\quad = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j^{ik}_{sa} + 1)}^{(\quad)}
$$

$$
\sum_{j_{ik} = j^{sa} + j^{ik}_{sa} - j_{sa}}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j^{ik}_{sa} + 1)} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} - \mathbb{k} - D - s)}^{(\quad)}
$$

$$
\sum_{n_i - \mathbb{k}}^{(n_i - 1)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s)}^{(\quad)}
$$

$$
\sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{(n_i + j_s + j_{ik} - j_{ik} - I - j^s_{sa})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j^{ik}_{sa} - j_{ik} - s - j^s_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(j_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(\quad + j^{sa} + \quad - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s - j^{ik}_{sa} \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \quad j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \quad < n \wedge I - \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^i_{sa} - \quad \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\quad \{ \quad j^{ik}_{sa}, j_{sa}, \cdots, j^i_{sa} \} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} +$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(\boldsymbol{l_s} +$$

$$\sum_{n+j_s}$$

$$\sum_{(n_i - j_s +$$

$$\sum_{=\boldsymbol{n}+\mathbb{k}} \sum_{=\boldsymbol{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}} \sum_{+j_s - j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{+ j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{- \boldsymbol{n})! \cdot (\boldsymbol{n} + + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + - s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s}$ $D - \boldsymbol{n}$ $1 \wedge$

$2 \leq$ $\leq j_{ik} - j_{sa}^{ik} +$ $j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}$ $^{ik} \leq j^{sa} \leq$ $+ j_{sa} - s \wedge$

$\boldsymbol{l_{ik}}$ $+ 1 = \boldsymbol{l_s}$ $\boldsymbol{_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} <$ $\wedge I = \mathbb{k} = 0 \wedge$

$\leq j_{sa}$ $1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=1}^{(\ )} \sum_{j_{ik}=j^{sa}+j_s} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{n_{ik}=n_{is}+} \sum_{n_{sa}=n_{ik}+j_{ik}} \frac{\left(n_i + j_{sa}^{ik} \right)!}{(n_i - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \le j \quad \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D > \quad < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{D-\boldsymbol{n}+1} \sum_{(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik} + 1)}^{(\quad)}$$

$$\sum_{j_{ik} = j_{sa}}^{\quad} \sum_{(\quad = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}^{\quad}$$

$$\sum_{\quad}^{n} \sum_{n_i = \quad \mathbb{k} (n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{\quad}$$

$$\sum_{= n \quad - j_{ik}}^{\quad} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{(\quad + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} \quad + I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < \quad \boldsymbol{l_s} > D - \quad + 1 \wedge$

$2 \leq \quad j_{ik} - j_{sa} \quad + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa} + 1)}^{(\boldsymbol{l_s} + j_{sa} - k)} \sum_{j_{ik} = j_{sa} + j_{sa}^{ik} - j_{sa}}^{(\boldsymbol{l_{ik}} + j_{sa} - \boldsymbol{n} - D)} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\ )} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\left(\boldsymbol{l_{ik}} + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(\boldsymbol{l_{ik}} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \geq \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\boldsymbol{n} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=\cdots}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{\cdots}
$$

$$
\sum_{j_{ik}=j^{\cdots}-j_{sa}^{ik}-j_{sa}}^{\cdots} \sum_{(\cdots=\boldsymbol{l_{ik}}+\boldsymbol{n}+j_{sa}-D-j_{sa}^{ik})}^{\cdots}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{\cdots} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz \sum_{j_s=} \sum_{j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}} \sum_{(j^{sa}=\boldsymbol{l_{ik}}+\boldsymbol{n}+j_{sa}-D-j_{sa}^{ik})}^{(\boldsymbol{l_{sa}}-k+1)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)}$$

$$\sum_{j^{sa} + j_{sa}^{ik} - \mathbb{k}} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s}^{\,\cdots\,;j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\quad)}
$$

$$
\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}^{(\boldsymbol{l_i} + j_{sa} - k - s + 1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)}
\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}^{(\boldsymbol{l_{sa}} - k + 1)}
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$j_{i\ldots}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_i} + j_{sa}^{ik} - k - s + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_{sa}}+j_{sa}^{ik}-k-j_{sa}+1}\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)!}.$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_{ik}}-k+1}\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

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$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa}^{ik} - D - 1}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s -$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} -$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_s$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\}$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$

$j_{sa} \leq j_{sa}^{i} -$ $j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa} \cdots, j_{sa}^{i}\right\}$

$s > 4 \wedge$ $= s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big)$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{sa}}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j$

$\left((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \right.$

s

$(D$

j_{sa}

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \right.$

s

$\mathbb{k}_z: z=1)$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\ \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

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$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+\quad-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-\quad-j_{sa}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s-j_{sa}^{ik}-j_{ik}-\quad-j_{sa}^{s}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-\quad-k-1)!}{\quad-k+\quad!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\quad)!}{(D+j^{sa}+s-\boldsymbol{n}-\quad-j_{sa})!\left(\boldsymbol{n}+j_{sa}-j^{sa}-s\right)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j^{ik}\quad \leq j_{ik} \leq j\quad+j_{sa}^{ik}-j\quad \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}\quad_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}\quad=\boldsymbol{l_{ik}} \wedge \boldsymbol{l}\quad j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I=\quad=0 \wedge\right.$

$j_{sa}^{s} \leq j_{sa}^{i}-1 \wedge\quad=j_{sa}-1 \wedge j_{sa}^{s} \leq\quad_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{\quad\cdots, j_{sa}^{ik}, j_{sa}, \cdots\quad\} \wedge$

$>3 \wedge\quad s) \vee$

$(D \geq\quad<n \wedge\quad=0 \wedge$

$j_{sa} \leq j_{sa}^{i}\quad \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\quad:\{j_{sa}^{s}, \cdots\quad, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}-j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j^{ik}_{sa}-D-s}^{\boldsymbol{l_s}+j^{ik}_{sa}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{(n_i + j_s + \quad - s - \quad - j^s_{sa})!}{(n_i - \boldsymbol{n} \quad)! \cdot (\boldsymbol{n} \quad + j^{ik}_{sa} \quad - j^s_{sa})!} \cdot
$$

$$
\frac{\quad - k - 1)!}{\quad - j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \quad)!}{(D + \quad + s - \quad - \boldsymbol{l_i} - \quad)! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + \quad \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + \quad - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \quad \boldsymbol{n} < n \wedge I = \mathbb{k} \quad 0 \wedge$

$j_{sa} \leq j^i_{sa} \quad \wedge j^{ik}_{sa} = j_{sa} \quad 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \quad j^{ik}_{sa}, j_{sa}, \quad , j^i_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = \quad) \vee$

$\quad n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j^{ik}_{sa} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j^{ik}_{sa} - D - j_{sa}}^{\boldsymbol{l_i} + j^{ik}_{sa} - k - s + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j^{ik}_{sa})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_i - j_s + 1)}^{(\ )}
$$

$$
\sum_{n_{ik} + j_s}^{(\ )} \sum_{(n_{sa} = n_i - j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i + \quad + j^{ik}_{sa} - \quad - s - I - j_{sa})!}{(n_i - \boldsymbol{n} - I)! \quad + j_s + \quad - j_{ik} - s - j^{s}_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad \boldsymbol{l_i})!}{(D + j^{sa} + \quad - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \leq \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad {}^{sa} \leq \boldsymbol{n} \quad - s$

$\boldsymbol{l_{ik}} \quad {}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_i} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} \quad 0 \wedge$

$j_{sa} \quad - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j \quad j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$\quad = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j^{ik}_{sa} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j^{ik}_{sa} - D - j_{sa}}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} - j_{sa} - j^{ik}_{sa})}^{(\ )}
$$

$$
\sum^{(n_i - 1)}
$$

$$
n_i \sum \mathbb{k} \, (n_{is} = \boldsymbol{n} + \mathbb{k} - j_s)
$$

$$
\sum^{(\ )}
$$

$$
\sum_{j_{ik} = n_{is} + j_{ik}} {}_{ik} \, (n_{sa} = n_{ik} + \quad)^{j^{sa} - \mathbb{k})}
$$

$$
\frac{(n_i + j_s + \quad^{ik} - j_{ik} \quad - I - j^s_{sa})!}{(n_i \quad \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} \quad + j^{ik}_{sa} - j_{ik} - s - j^s_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{\quad - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{\quad + j^{sa} + s \quad \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - \quad + 1 \wedge j_s \quad j^{ik}_{sa} - \quad \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} \quad s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \quad j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \quad < n \wedge I \quad = 0 \wedge$

$j_{sa} \leq j^i_{sa} \quad \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\{s \quad j^{ik}_{sa}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} +}$$

$$\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{}$$

$$\sum_{\boldsymbol{n}+\mathbb{k}} \sum_{\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+}$$

$$\sum_{n_{ik}=} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{+ j_s + j_{sa}^{ik} - _{ik} - s - I - j_{sa}^{s})!}{- \boldsymbol{n})! \cdot (\boldsymbol{n} + + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} D - \boldsymbol{n} \wedge$

$2 \leq j_{} j_{ik} - j_{sa}^{ik} + j_s + j_{sa}^{} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - ^{ik} \leq j^{sa} \leq + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < \wedge I = \mathbb{k} = 0 \wedge$

$j_{} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=2}^{(} \sum_{-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}}^{\boldsymbol{l_i}+j_{sa}^{ik}-k-s} \sum_{(j^{sa}=j_{ik}+j_{sa}-}^{(}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}\,(n_{is}}^{n} \sum^{(n_i-j_s+1)} -j_s+1)$$

$$\sum_{n_{ik}=n_{is}+} \sum_{j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(}$$

$$\frac{\left(n_i + \quad + j^{ik} \quad j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \quad - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D \quad j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \quad _s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} \quad _{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\quad < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)}
$$

$$
\sum_{n-D}^{\boldsymbol{l_{sa}} + j_{sa}^{ik} - k - } \sum_{(j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\quad)}
$$

$$
\sum_{n_i = \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}
$$

$$
\sum_{= n_{sa} - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{(\quad + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < \boldsymbol{l_s} > D - + 1 \wedge$

$2 \leq j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \left(\right.
$$

$$
\sum_{j_{ik}} \sum_{+\boldsymbol{n}-D} \left(\right. - j_{sa}^{ik})
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{( )}
$$

$$
\frac{\left(+ j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{\boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \quad n \wedge \boldsymbol{l_s} > \quad - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i} \quad j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=\cdots}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{\cdots}
$$

$$
\sum_{j_{ik}=\cdots}^{\boldsymbol{l_i} + j_{sa} \cdots - s + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{\cdots}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ \ )}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz \sum_{j_s=1}^{D-1} \sum_{j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{n}+k-D-1}^{(\ )} \left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\ldots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{\quad} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)}$$

$$\sum_{j_{ik} = \boldsymbol{l_s} + \boldsymbol{n} + \quad - D - 1}^{\boldsymbol{l_{ik}} \quad + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\quad)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}}^{DS} = \sum_{k=1}^{\boldsymbol{n}+1} \sum_{j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_i}-k-s+2)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{\quad=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fz S_{j_s} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_s} + \boldsymbol{n} - D)}^{(\boldsymbol{l_s} - k + 1)}
$$

$$
\sum_{j_{ik} = j_s + j_{sa}^{ik} - 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)}
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum^{(\ )}_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)!}\cdot
$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )}\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

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$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_i} + \boldsymbol{n} - D - s + 1)}^{(\boldsymbol{l_s} - k + 1)}$$

$$\sum_{j_{ik} = j_s + j_{sa}^{ik} - 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-\mathbb{k} \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big) \wedge$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_i}-k-s+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{\ }=\boldsymbol{l_{ik}} \wedge \boldsymbol{l}_{\ }-j_{sa}-s=$ $\wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge$ $\leq j_{sa}^{ik}-1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa},$ $j_{sa}^{i}\} \wedge$

s $3 \wedge \boldsymbol{s}=$ $\wedge$

$(D$ $\boldsymbol{n} < n \wedge I=$ $> 0 \wedge$

$j_{sa} \leq j_{sa}$ $1 \wedge j_{sa}^{ik}=j_{s}$ $1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{i}$ $j_{sa}\} \wedge$

s $4 \wedge$ $s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1) \Rightarrow$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\ \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{n_{is}=\boldsymbol{n}+\mathbb{k}-j_s}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{n_{sa}=n_{ik}+}$$

$$\frac{(n_i+j_s+j_{sa}^{ik}-j_{ik}-\quad-j_{sa}^{s})!}{(n_i-\boldsymbol{n}-I)!\cdot(\boldsymbol{n}+j_s+\quad j_{sa}^{ik}-j_{ik}-\quad j_{sa}^{s})!}\cdot$$

$$\frac{(\boldsymbol{l_s}\quad k-1)!}{\quad\boldsymbol{l_s}-k+\quad!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\quad)!}{(D+j^{sa}+s-\boldsymbol{n}-\quad-j_{sa})!\quad(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}\quad \leq j_{ik} \leq j_{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}\quad j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}\quad=\boldsymbol{l_{ik}} \wedge \boldsymbol{l}\quad j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\quad=0 \wedge$

$j_{sa}^{s} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{\quad \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$>3 \wedge \quad s) \vee$

$(D \geq \quad < n \wedge \quad 0 \wedge$

$j_{sa}^{s} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\quad: \{j_{sa}^{s}, \cdots \quad a, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+j^{ik}_{sa}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\quad)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\quad\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(\quad=n_{ik}+j_{ik}-j^{sa}\quad)}^{(\quad)}
$$

$$
\frac{(n_i + j_s \quad\quad - s - \quad - j^s_{sa})!}{(n_i \quad \boldsymbol{n} - I)! \cdot (\boldsymbol{n} \quad j_s + j_{sa} \quad\quad - j^s_{sa})!} \cdot
$$

$$
\frac{\quad\quad\quad\quad \boldsymbol{l_s} - k - 1)!}{\quad - j_s \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \quad)!}{\quad sa + s \quad - \boldsymbol{l_i} - j \quad)! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 \quad \wedge \boldsymbol{l_{sa}} + \quad ik - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \quad \boldsymbol{n} < n \wedge I = \quad = 0 \wedge$

$j_{sa} \leq j^i_{sa} \quad 1 \wedge j^{ik}_{sa} = j_{sa} \quad 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa} \quad \cdots, j^{ik}_{sa}, j_{sa} \quad sa\} \wedge$

$s > 3 \wedge \boldsymbol{s} \quad s) \vee$

$D > \boldsymbol{n} \quad t \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j^{ik}_{sa}+1)}^{(\boldsymbol{l_i}-k-s+2)}
$$

$$
\sum_{j_{ik}=j_s+j^{ik}_{sa}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa}}^{(\ \ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}} \sum_{(\ \ j_s+1)}^{n}
$$

$$
\sum_{n_{ik}=} \sum_{(n_{sa}=n_{j_{ik}}-j^{sa}-\mathbb{k})}^{(\ \ )}
$$

$$
\frac{(n_i - + j^{ik}_{sa} - - s - 1 -)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + - j_{ik} - s - j^{s}_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad \boldsymbol{l_i})!}{(D + j^{sa} + - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \wedge j_s + j^{ik}_{sa} - 1 \leq \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} - {}^{sa} \leq \boldsymbol{n} - s$

$\boldsymbol{l_{ik}} - {}^{ik} + 1 = \boldsymbol{l_s} \wedge + j^{ik}_{sa} - = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq - 1 \wedge j_{sa} - j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j - j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$= s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j^{ik}_{sa}+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)}
$$

$$
\sum_{j_{ik}=j_s+j^{ik}_{sa}-1}^{(\quad)} \sum_{(j^{sa}=j_{ik}}^{(\quad)} {}_{sa}-j^{ik}_{sa})
$$

$$
\sum^{(n_i-\quad-1)}
$$

$$
n_i \quad \mathbb{k} \sum^{(\quad)} (n_{is}=\boldsymbol{n}+\mathbb{k}-j_s
$$

$$
\sum^{(\quad)}_{ik}=n_{is}+ \quad {}_{ik} (n_{sa}=n_{ik}+ \quad {}^{sa}-\mathbb{k})
$$

$$
\frac{(n_i + j_s + \quad {}^{ik} - j_{ik} \quad - I - j^s_{sa})!}{(n_i \quad \boldsymbol{n} - I)! \cdot (\boldsymbol{n} \quad + j^{ik}_{sa} - j_{ik} - s - j^s_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{\quad - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{\quad + j^{sa} + s \quad \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \quad < n \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - \quad + 1 \wedge j_s \quad j^{ik}_{sa} - \quad \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} \quad s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \quad j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \quad < n \wedge I \quad = 0 \wedge$

$j_{sa} \leq j^i_{sa} - \quad \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\{s \quad {}^{ik}_{sa}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j_{sa}^{ik}+}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum
$$

$$
\sum_{=\boldsymbol{n}+\mathbb{k}} \sum_{=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+}
$$

$$
\sum_{n_{ik}-} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{+ j_s + j_{sa}^{ik} - \ ik - s - I - j_{sa}^{s})!}{ - \boldsymbol{n} + 1)! \cdot (\boldsymbol{n} + + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + \ s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \ D - \boldsymbol{n} \ 1 \wedge$

$2 \leq \ \leq j_{ik} - j_{sa}^{ik} + \ j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \ ^{ik} \leq j^{sa} \leq \ + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \ ^{ik} + 1 = \boldsymbol{l_s} - \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < \ \wedge I = \mathbb{k} = 0 \wedge$

$\ < \ 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(\boldsymbol{l_s}+\boldsymbol{n}-D)}^{(\boldsymbol{l_i}-k-s+} \sum_{j_{ik}=j_s+j_{sa}-1}^{(} \sum_{(j^{sa}=j_{ik}+j_{sa}-k)}^{(} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{} $$

$$ \frac{\left(n_i + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot $$

$$ \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot $$

$$ \frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!} $$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D > \quad n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{(j_s=\boldsymbol{l_s}-k-j_{sa}+2)}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_s}-k-\boldsymbol{n}-D)}^{(\quad)} \sum_{j_{ik}+j_{sa}^{ik}-1 (j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\quad)} \sum_{(\quad+1)}^{n} \sum_{n_i \quad +\mathbb{k} (n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(\quad)} \sum_{j_{ik}=n_{is} \quad -j_{ik} (n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{+ j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \quad + 1 \wedge$

$2 \leq j_{ik} - j_{sa} \quad \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad - j^{ik} \quad 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \left(\boldsymbol{l_{ik}} - j_{sa}^{ik} + 2\right)
$$

$$
\sum_{(j_s = \boldsymbol{l_s} - \quad + 2)}^{(\quad)}
$$

$$
\sum_{j_{ik} = \quad + j_{sa}^{ik} - 1}^{(\quad)} \left(\quad - j_{sa}^{ik}\right)
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\quad)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\left(\quad + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{\quad - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \quad < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i} \quad j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$f_z S_{j_s, \ldots, j_{sa}} = \sum_{k=1}^{D_{\boldsymbol{s}}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(\boldsymbol{l_{sa}} - k + 1)} \left(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s\right)$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \left(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1\right)$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\ )} \left(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}\right)$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} \leq \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} \leq \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

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$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} \sum_{k=1}^{D+\boldsymbol{l_s}-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )}
\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik}+1)}
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} -$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\cdots s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)} \cdots
$$

$$
\sum_{j_{ik} \cdots + j_{sa}^{ik} - j_{sa} \cdots = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)} \sum
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < \cdots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

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$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$j_{s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{sa}} + j_{sa}^{ik} - k - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}} \wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-I} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{ik+k+1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa} + 1 > \boldsymbol{l_s} \wedge$

$D + \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fz S_{j_s, j_{ik}, j}^{DSD} \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{l_i}} \sum_{j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+\boldsymbol{l_s}+j_{sa}^{ik}-D-s}^{(\ )} \left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \left(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}\right)$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$(\quad < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_{ik}, j^{sa}}^{D} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}} \wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fz_{j_{ik}, j^{sa}}^{DSD} = \sum_{=1}^{\boldsymbol{l_i}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

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$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$$

$$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$$

$$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$$

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$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{sa}} - j_{sa} + 1 > \boldsymbol{l_s} \wedge$$

$$D + \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$$

$$j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$$

$$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-} \sum_{D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}+j_{sa}^{ik}-1}^{} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$(D > \quad n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S^{I}_{j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )}
$$

$$
\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+j_{sa}-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)) \wedge$ [illegible]

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik}=$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}$ [illegible] $\cdots, j_{sa}^{i}$ [illegible]

$s >$ [illegible] $\boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)$ [illegible]

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}}\ \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j_{sa}^{ik}+1)}\ \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s +$

$\mathbb{k}, z = 1))$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(\boldsymbol{l_s} + j_{sa} - k)} \left(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s\right) \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \left(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1\right) \sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(n_i - j_s + 1)} \left(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}\right) \sum^{(\ )} $$

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$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$$\left((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge\right.$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

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$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$\overset{DSD}{\underset{j_s, j_{ik}, j^{sa}}{\mathbb{O}}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}^{(\boldsymbol{l_s} + j_{sa} - k)} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )} \frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}$

$D+j_{sa}-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa} \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge \mathbb{k}=\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s}=s \wedge \mathbb{k} \wedge$

$\mathbb{k}_z: z=1) \big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}}\ \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{ik}}-k+1}\ \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1}{(\boldsymbol{l_s} - j_s - k)! \cdot (\quad - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l} - j_{sa})! \cdot (\boldsymbol{n} - j_{sa} - j^{sa} -}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} < D + \boldsymbol{l_s} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j^{ik}_{sa}+1)}^{(\ \ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j^{ik}_{sa}-D-j_{sa}}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\ \ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(\ \ \ \ j_s+1)}^{(\ \ )}
$$

$$
\sum_{n_{ik}=} \sum_{(n_{sa}=\ \ \ \ j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}
$$

$$
\frac{(n_i + j^{ik}_{sa} - s - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{ik} - j_{ik} - s - j^{s}_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\ \ \ \ \boldsymbol{l_i})!}{(D + j^{sa} + \ \ - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \ \ \wedge j_s + j^{ik}_{sa} - 1 \leq \ \ \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq \ \ ^{sa} \leq \boldsymbol{n} + \ \ _{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \ \ ^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \ \ \wedge \boldsymbol{l_s} > D - \ \ + 1 \wedge$

$2 \leq \ \ j_{ik} - j_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \ \ ^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\ \ ^{ik} - 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - \boldsymbol{l_{sa}}$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big)$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}-j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j^{ik}_{sa}-D-s}^{\boldsymbol{l_s}+j^{ik}_{sa}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{(n_i + j_s + \quad - s - \quad - j^s_{sa})!}{(n_i - \boldsymbol{n} \quad)! \cdot (\boldsymbol{n} \quad + j^{ik}_{sa} \quad - j^s_{sa})!} \cdot
$$

$$
\frac{\quad - k - 1)!}{\quad - j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \quad)!}{(D + \quad + s - \quad - \boldsymbol{l_i} - \quad)! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$$
\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge
$$

$$
2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge
$$

$$
j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge
$$

$$
\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee
$$

$$
(D \geq \quad < n \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge
$$

$$
2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge
$$

$$
j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge
$$

$$
\boldsymbol{l_{ik}} - j^{ik}_{sa} + \quad > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee
$$

$$
\quad n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge
$$

$$
2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge
$$

$$
j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge
$$

$$
\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee
$$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l} = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l} = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik} - \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ \ )} $$

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$$\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{\left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+\quad -j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-\quad -j_{sa}^{\quad}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+\quad {}_{sa}^{ik}-j_{ik}-\quad {}_{sa}^{s}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}\quad -1)!}{\quad k+\quad !\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\quad)!}{(D+j^{sa}+s-\boldsymbol{n}-\quad -j_{sa})!\left(\boldsymbol{n}+j_{sa}-j^{sa}-s\right)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+\quad -j_{ik} \leq j^{\quad}+j_{sa}^{ik}-j_{\quad} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}\quad -s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-\quad > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \quad < n \wedge \boldsymbol{l_s} \leq \quad -\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-\quad +1 \wedge j_{\quad}+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}\quad -j_{sa}^{ik} \leq j^{s}\quad \boldsymbol{n}+j_{sa}\quad s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}\quad 1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}\quad j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$D+j\quad -\boldsymbol{n}<\quad +\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n}\quad \wedge I=\mathbb{k}=0 \wedge$

$\quad <j^{i}\quad 1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\right\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2} \sum_{j_{ik}=j_s+j_{sa}}^{(} \sum_{(j^{sa}=j_{ik}+j_{sa}-)}^{} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{} \frac{\left(n_i + \quad + j_{sa}^{ik} \quad j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \quad - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \boldsymbol{l_i})!}{(D - \quad j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D - \boldsymbol{n} < n \wedge \boldsymbol{l_s} > \quad - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \quad j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$\quad n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fz^{DSD}_{j_{ik}, j^{sa}} = \sum_{k=} \sum_{(j_s = \boldsymbol{l_{sa}} + \boldsymbol{n} - D - j_{sa} + 1)}^{(\boldsymbol{l_{ik}} - k - j_{sa}^{ik} + 2)} \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{(\ )} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} -$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{\quad}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\quad} \sum_{\quad}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{\quad=1} \sum_{\quad}^{D-s+1)}$$

$$\sum_{j_{ik}\quad+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\quad)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$(D > \quad n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\quad)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{}
$$

$$
\frac{\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i - I)! \cdot \left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)! \cdot (j_s-2)!} \cdot
$$

$$
\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})! \cdot (\boldsymbol{n}+j_{sa}-j^{sa}-s)!}
$$

$\big((D > \boldsymbol{n} < n \wedge j_s \leq D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \le D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$\sum_{j_s, j_{ik}, J}^{DSD} \sum_{k=1}^{D+\boldsymbol{l}_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}^{(\boldsymbol{l_s} + j_{sa} - k)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge$ $\leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{s}^{s}$ $\cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}$ $, j_{sa}^{i}\} \wedge$

s $4 \wedge \boldsymbol{s} = s$ $\mathbb{k} \wedge$

$\mathbb{k}_z$ $= 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )} $$

$$ \sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} $$

$$ \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} $$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - 1) \wedge$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s$

$(D \geq \boldsymbol{n} < \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j^{ik}_{sa}+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+j^{ik}_{sa}-1} \left(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa}\right)^{(\ \ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \left(n_{is}=n_{ik}-j_s+1\right)^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \left(\quad=n_{ik}+j_{ik}-j^{sa}\right)^{(\ \ )}
$$

$$
\frac{\left(n_i+j_s-\quad-s-\quad-j^s_{sa}\right)!}{(n_i-\boldsymbol{n}-\quad)!\cdot\left(\boldsymbol{n}-\quad+j_{sa}-\quad-j^s_{sa}\right)!}\cdot
$$

$$
\frac{\quad-k-1)!}{-j_s-\quad+1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(D-\quad)!}{(D-\quad+s-\quad-\boldsymbol{l_i}-\quad)!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}-\quad \wedge$

$2 \leq j_s \leq j_{ik}-j^{ik}_{sa}+1 \wedge j_s+j^{ik}_{sa}-1 \leq j_{ik} \leq \quad a+j^{ik}_{sa}-j_{sa} \wedge$

$j_{ik}+\quad-j^{ik}_{sa} \leq j^{s}\quad \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j^{ik}_{sa}+1=\quad \wedge \boldsymbol{l_{sa}}+\quad-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\left((D\quad \boldsymbol{n} < n \wedge I=\quad=0 \wedge\right.$

$j_{sa} \leq j^{i}_{sa}\quad \wedge j^{ik}_{sa}=j_{s}\quad -1 \wedge j^{s}_{sa} \leq j^{ik}_{sa}-1 \wedge$

$\boldsymbol{s}: \{j^{s}\quad, j^{ik}_{sa}, j_{sa}, \quad, j_{sa}\} \wedge$

$s>3 \wedge \boldsymbol{s}=\quad) \vee$

$\quad>n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j^{i}_{sa}-1 \wedge j^{ik}_{sa}=j_{sa}-1 \wedge j^{s}_{sa} \leq j^{ik}_{sa}-1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}^{(\boldsymbol{l_i} + j_{sa} - k - s + 1)} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n}}^{n} \sum_{= \boldsymbol{n} +}^{(\ j_s + 1)}$$

$$\sum_{} \sum_{(n_{sa} = + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i \quad j_{sa}^{ik} \quad j_{ik} - s \quad \right)!}{(n_i - \boldsymbol{n} - l) \quad \left(\boldsymbol{n} + j_s \quad {}^{ik}_{sa} - j_{ik} - s - j^s_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} \quad k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{\quad - \boldsymbol{l_i})!}{(D \quad j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j \quad \leq j_{ik} - j^{ik}_{sa} \quad \wedge j_s + j^{ik}_{sa} - 1 \quad j_{ik} + j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad j^{sa} \leq \boldsymbol{n} \quad j_{sa} - s \quad$

$\boldsymbol{l_{ik}} \quad {}^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \quad + j^{ik}_{sa} \quad {}_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D \geq \boldsymbol{n} \quad n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j \quad - 1 \wedge j \quad {}_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j \quad j_{sa}, \cdots, j^i_{sa}\} \wedge$

$\quad > 3 \wedge \quad s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}^{(\boldsymbol{l_{sa}} - k + 1)} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D}$$

$$\sum_{n_i = \boldsymbol{n}}^{n} \sum_{= \boldsymbol{n} +}^{(\ j_s + 1)}$$

$$\sum_{} \sum_{}^{(\ )}$$

$$\frac{\big(n_i - \quad + j_{sa}^{ik} - j_{ik} - s - \quad\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_s - \quad - j_{ik} - s - j_{sa}^{s}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} \quad k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{\quad - \boldsymbol{l_i})!}{(D \quad j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j \leq j_{ik} - j_{sa}^{ik} \quad \wedge j_s + j_{sa}^{ik} - 1 \quad j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \quad j^{sa} \leq \boldsymbol{n} \quad j_{sa} - s$

$\boldsymbol{l_{ik}} \quad {}^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \quad + j_{sa}^{ik} \quad {}_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D \geq \boldsymbol{n} \quad n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j \quad - 1 \wedge j \quad {}_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j \quad j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$> 3 \wedge \quad s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{\left(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j^{ik}_{sa}\right)}^{\left(\boldsymbol{l_{ik}} + j_{sa} - k - j^{ik}_{sa} + 1\right)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum^{(\ \ j_s + 1)}$$

$$\sum_{n_{ik}} \sum^{(\ )}_{(n_{sa} = n_{ik} - j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{\left(n_i + j^{ik}_{sa} - s - I\right)!}{(n_i - \boldsymbol{n} - I)! \left(\boldsymbol{n} + j_s + j_{ik} - j_{ik} - s - j^{s}_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \wedge j_s + j^{ik}_{sa} - 1 \leq \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{ik}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$= s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}^{(\boldsymbol{l_s} + j_{sa} - k)} \sum_{(j^{sa} = \boldsymbol{l_s} + \boldsymbol{n}_{\ } + j_{sa} - D - 1)}$$

$$\sum_{\ }^{(n_i - \ + 1)}$$

$$\sum_{\ }^{\ } \ \mathbb{k} \ (n_{is} = \boldsymbol{n} + \mathbb{k} - j_{\ } + 1)$$

$$\sum_{n_{ik} = n_{is} - \ + j_{ik} \ (n_{sa} = \ \ j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s - \ ^{ik}_{sa} - j_{ik} - \ - s - I - j^s_{sa}\right)!}{(\ - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} - j_s + j^{ik}_{sa} - j_{ik} - s - j^s_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + \ ^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \ < n \wedge \boldsymbol{l_s} > \ - \boldsymbol{n} + 1 \wedge$

$2 \ j_s \leq j_{ik} - \ ^{ik} + 1 \wedge \ + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} \ _{sa} - j^{ik}_{sa} \leq j^{\ } \boldsymbol{n} + j_{sa} \ s \wedge$

$_{ik} - j^{ik}_{sa} \ 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \ j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D > \boldsymbol{n} < n \ \ = 0 \wedge$

$j_{sa} \leq j^i_{sa} \ \ \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\ \{j^s_{sa}, \ \ _{sa}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s} : \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}^{(\boldsymbol{l_{sa}} - k + 1)} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} \ldots_{sa} - D - s)}$$

$$\sum_{\ldots + \mathbb{k}}^{(n_i - \ldots + 1)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - \ldots)}$$

$$\sum_{n_{ik} = n_{is} \ldots j_{ik}}^{(\ )} \sum_{(n_{sa} = \ldots^{sa} - \mathbb{k})}$$

$$\frac{\big(n_i + j_s \ldots^{ik}_{sa} - j_{ik} \ldots s - I - j^s_{sa}\big)!}{(\ldots - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} \ldots_s + j^{ik}_{sa} \ldots j_{ik} - s - j^s_{sa}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l} \ldots j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + \ldots^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \ldots < n \wedge \boldsymbol{l_s} > \ldots - \boldsymbol{n} + 1 \wedge$

$2 \ldots j_s \leq j_{ik} - \ldots^{ik} + 1 \wedge \ldots + j^{ik}_{sa} - 1 \ldots \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} \ldots_{sa} - j^{ik}_{sa} \leq j^{\ldots} \ldots \boldsymbol{n} + j_{sa} \ldots s \wedge$

$\ldots_{ik} - j^{ik}_{sa} \ldots 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \ldots j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge \ldots = 0 \wedge$

$j_{sa} \leq j^i_{sa} \ldots \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\ldots \{j^s_{sa}, \ldots \ldots_{sa}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s} : \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n}}$$

$$\sum_{} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} -}$$

$$\sum_{n_{ik} = n_{is} +} \sum_{(n_{sa} = n_{ik}}^{(\ )}$$

$$\frac{(n_i + j_s + \quad - j_{ik} \quad - I - j^s_{sa})!}{(\quad \boldsymbol{n} - I)! \cdot (\boldsymbol{n} \quad + j^{ik}_{sa} - j_{ik} - s - j^s_{sa})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\quad - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + \quad ^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \quad < n \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - \quad ^{k} + 1 \wedge j \quad j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} \quad _{sa} - j^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} \quad s \wedge$

$\boldsymbol{_{ik}} - j^{ik}_{sa} \quad 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \quad j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \quad \boldsymbol{n} < n \wedge \quad = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} \quad \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\{j_s \quad ^{k}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_i}} \sum_{(\boldsymbol{l_s} + \quad - k)}
$$

$$
\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{+\boldsymbol{n} + j_s \quad (D-s)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k} \quad} \sum_{= \boldsymbol{n} + \mathbb{k} - j_s + 1)}
$$

$$
\sum_{n_{ik} \quad + j_s - j_{ik} \quad} \sum_{= n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{(n_i + j_s + j_{sa}^{ik} \quad j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} \quad I)! \cdot (\boldsymbol{n} + \quad + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(\quad + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l} \quad > D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad \wedge j_s + j_{sa} \quad - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad _{ik} + j_{sa} \quad _{a}^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad ^{ik} + 1 = \quad \boldsymbol{a} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$\quad < j_{sa}^{i} \quad 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_i}}$$

$$(\boldsymbol{l_i} + \quad - k - s + 1)$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}}} \quad \sum_{^{sa} = \boldsymbol{l_{sa}} \quad \boldsymbol{n} - D)}$$

$$(n_i - \quad$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}} \quad \sum_{= \boldsymbol{n} + \mathbb{k} - j_s + 1)}$$

$$\sum_{n_{ik} \quad + j_s - j_{ik}} \quad \sum_{= n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{(n_i + j_s + j_{sa}^{ik} \quad j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} \quad I)! \cdot (\boldsymbol{n} + \quad + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(\quad + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l} \quad > D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad \wedge j_s + j_{s} \quad - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad _{ik} + j_{sa} \quad _{a}^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad ^{ik} + 1 = \quad \boldsymbol{a} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$\quad < j^{i} \quad 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_i}}^{(\ )}
$$

$$
(\boldsymbol{l_{ik}} + j_{sa} \quad - j_{sa}^{ik} + 1)
$$

$$
\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \quad \sum \quad - \boldsymbol{l_{sa}} + \quad - D)
$$

$$
(n_i - j_s
$$

$$
\sum \quad = \boldsymbol{n} + \mathbb{k} \quad \sum \quad = \boldsymbol{n} + \mathbb{k} - j_s + 1)
$$

$$
n_{ik} \quad \sum \quad + j_s - j_{ik} \quad \sum \quad = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} \quad - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} \quad I)! \cdot \left(\boldsymbol{n} + \quad + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(\quad + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad \wedge j_s + j_{sa} \quad 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} \quad {}^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} \quad {}^{ik} + 1 = \quad \boldsymbol{sa} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$\quad {}^{i} \quad 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s-1+\boldsymbol{l_s}-\boldsymbol{l_{ik}})} \sum_{(\boldsymbol{l_s}+1-k)} \sum_{j_{ik}=j^{sa}-\boldsymbol{l_{sa}}\,(j^{sa}=\boldsymbol{l_{sa}}+1-0)} \sum_{n}^{(n_i-j_s+1)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}\,(\quad -j_s+1)} \sum^{(\quad)} \sum_{n_{ik}=n_{is}+\quad -j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i \quad + j_{sa}^{ik} \quad _{ik} - s - I - j_{sa}^{s}\right)!}{(n_i \quad \boldsymbol{n} - I)! \cdot (\quad + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge$

$\quad \le j_s \le \quad - j_{sa}^{ik} + 1 \wedge \quad + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D > \boldsymbol{n} \quad n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s - \boldsymbol{l_s} + \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{(\ =\boldsymbol{l_{ik}}+\boldsymbol{n}+j_{sa}-D-\ )}^{(\ +j_{sa}-k-\ 1)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(\ +j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+\ j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i - \ + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \ - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \ge \ < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \ - j_{sa}^{ik} \ \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \ = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D > \ \ n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{(j_s = j_{ik} - \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{D-\boldsymbol{n}+1} \sum_{(\boldsymbol{l_{sa}} - k$$

$$\sum_{j_{ik}=j_{\boldsymbol{s}}} \sum_{\boldsymbol{l_{sa}}\left(j^{sa}=\boldsymbol{l_{ik}}+j_{sa}-D-j_{sa}^{ik}\right)}$$

$$\sum_{n_i} \sum_{+\mathbb{k}\,(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{j_{ik}=n_{is}} \sum_{-j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{+ j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < \wedge \boldsymbol{l_s} > D - + 1 \wedge$

$2 \leq \leq j_{ik} - \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$- j^{ik} = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} \quad \boldsymbol{l_{ik}})} \sum_{+j_{sa}-k)} \sum_{k=j^{sa}+\boldsymbol{l}_{\boldsymbol{sa}}} \sum_{(j^{sa}= \quad -j_{sa}^{ik})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \quad < n \wedge \boldsymbol{l_s} \quad \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} ^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}} \sum_{j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_s} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\leq j_s \leq - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\boldsymbol{l_{sa}} \quad +1)}
$$

$$
\sum_{j_{ik}}^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l}_{s}^{sa} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\leq j_s \leq \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} ^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}
$$

$$
j_{sa}^{ik}+1)
$$

$$
\sum_{j_{ik}} \sum_{sa} (\boldsymbol{l_{ik}} - \boldsymbol{l_{sa}} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$< j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz^{S}_{j_s} \sum_{\quad} \sum_{\quad}^{D-\quad+1} \sum_{\quad}^{(\ )} \sum_{\quad}^{(\ )} \sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{n} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{(\ )}^{(\ )} \sum_{(\ )}^{(\ )} \sum_{(\ )

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{\quad} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\quad)}$$

$$\sum_{\boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} + 1}^{\quad} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\quad)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{\big(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s}^{\boldsymbol{D}-\boldsymbol{n}+1} {}_{j^{sa}} = \sum_{k=1}^{\boldsymbol{D}-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_{ik}} + \boldsymbol{n} - D}^{\boldsymbol{l_i}-k+1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s}^{\boldsymbol{n}} {}_{j^{sa}} = \sum_{k=\boldsymbol{n}}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa}^{ik} - D - 1}^{\boldsymbol{l_s} + j_{s}^{i} \quad k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\quad)}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_s} - k - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\quad)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$S_{i\ldots j\ldots}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_i}+j_{sa}^{ik}-k-s+1}\sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)!}\cdot$$

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$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j_{sa}^{ik} - D - j_{sa}}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

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$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} -$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq$ $_{a}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa} \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} =$ $+ \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j_{sa}^{ik} - D - j_{sa}}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})} \frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!} \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa} \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \wedge$

$$_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum^{(\ )}_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})} \sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_i}+j_{sa}^{ik}-k-s+1} \sum^{(\ )}_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k)!\cdot(-2)!}\cdot$$

$$\frac{(D-)!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}-\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l}}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}$ $-j_{sa}^{ik}-j_{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j$ $=\boldsymbol{l_{ik}} \wedge \boldsymbol{l}$ $j_{sa}-s=$ $\wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge$ $\leq j_{sa}^{ik}-1$

$\boldsymbol{s}:\left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa},\right.$ $j_{sa}^{i}\} \wedge$

s $3 \wedge \boldsymbol{s}=$ $\wedge$

$(D$ $\boldsymbol{n}<n \wedge I=$ $>0 \wedge$

$j_{sa} \leq j_{sa}$ $1 \wedge j_{sa}^{ik}=j_{s}$ $-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s}, \cdots, j_{sa}^{i}\right.$ $j_{sa}\} \wedge$

s $4 \wedge$ $s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)$ $\Rightarrow$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\ \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_{sa}}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_{sa}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - \right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - \right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{ - k +)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(- \boldsymbol{l_i})!}{(D + j^{sa} - - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j^{ik} \leq j_{ik} \leq + j_{sa}^{ik} - j \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} - j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - = \boldsymbol{l_{ik}} \wedge \boldsymbol{l} j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge = j_{sa} - 1 \wedge j_{sa}^{s} \leq ^{ik} - 1 \wedge$

$\boldsymbol{s}: \{ \cdots, j_{sa}^{ik}, j_{sa}, \cdots \} \wedge$

$> 3 \wedge s) \vee$

$(D \geq < n \wedge 0 \wedge$

$j_{sa} \leq j_{sa}^{i} \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\{j_{sa}^{s}, \cdots , \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l}}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{a=n_{ik}+j_{ik}-j^{s}}^{(\ )}
$$

$$
\frac{(n_i + j_s \quad - s - j_{sa}^s)!}{(n_i \quad \boldsymbol{n} - I)! \cdot (\boldsymbol{n} \quad j_s + j_{sa} \quad - j_{sa}^s)!} \cdot
$$

$$
\frac{\boldsymbol{l_s} - k - 1)!}{\quad - j_s \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad - \boldsymbol{l_i})!}{(D + \quad - \boldsymbol{n} - \boldsymbol{l} \quad)! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} \quad 1 \leq j_{ik} \leq \quad a + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \leq j \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 \quad \wedge \boldsymbol{l_{sa}} + \quad ik - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \quad \boldsymbol{n} < n \wedge I = \quad = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} \quad 1 \wedge j_{sa}^{ik} = j_s \quad - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_s \quad \cdots, j_{sa}^{ik}, j_{sa} \quad sa\} \wedge$

$s > 3 \wedge \boldsymbol{s} \quad) \vee$

$D > \boldsymbol{n} \quad t \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik} = \boldsymbol{l_s} + \boldsymbol{n} + j^{ik}_{sa} - D - 1}^{\boldsymbol{l_i} + j^{ik}_{sa} - k - s + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}}}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(\quad + j_s + 1)}$$

$$\sum_{n_{ik} = \quad} \sum_{(n_{sa} = \quad j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{\left(n_i - \quad + j^{ik}_{sa} - k - s - 1\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + \quad - j_{ik} - s - j^{s}_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad ^{sa} \leq \boldsymbol{n} \quad _{sa} - s \wedge$

$\boldsymbol{l_{ik}} \quad ^{ik} + 1 = \boldsymbol{l_s} \wedge \quad + j^{ik}_{sa} - \quad _{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq \quad - 1 \wedge j_{sa} \quad - j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j \quad j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$\quad 2 \wedge \quad = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik} = \boldsymbol{l_s} + \boldsymbol{n} + j^{ik}_{sa} - D - 1}^{\boldsymbol{l_{sa}} + j^{ik}_{sa} - k - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}$$

$$\sum_{n_i = \mathbb{k}}^{(n_i - \mathbb{k} + 1)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s)}$$

$$\sum_{n_{ik} = n_{is} + j_{ik}}^{(\quad)} \sum_{(n_{sa} = n_{ik} \quad - j^{sa} - \mathbb{k})}$$

$$\frac{\left(n_i + j_s + \quad - j_{ik} \quad - I - j^s_{sa}\right)!}{(n_i \quad \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} \quad + j^{ik}_{sa} - j_{ik} - s - j^s_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\quad - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + \quad^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \quad < n \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - \quad + 1 \wedge j_s \quad j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} \quad s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \quad j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \quad < n \wedge \quad = 0 \wedge$

$j_{sa} \leq j^i_{sa} \quad \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\{; s \quad \quad _{sa}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_i}}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}^{ik}-D}^{\boldsymbol{l_{ik}}-k+1} \sum^{(\ )}_{=j_{ik}+\boldsymbol{l_{ik}})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-)_s} \sum_{=\boldsymbol{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}}^{+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(+ j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} - D - \boldsymbol{n} + 1 \wedge$

$2 \leq \leq j_{ik} - j_{sa}^{ik} + \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{sa} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < \wedge I = \mathbb{k} = 0 \wedge$

$< j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_i}-D-s+1)}^{(\boldsymbol{l_i}-k-s+2)} \sum_{j_{ik}=j_s+\boldsymbol{l_s}}^{(} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}}^{)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})} \frac{(n_i + j_{sa}^{ik} - n_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (n_{ik} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\le j_s \le j_{sa}^{i} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa}^{s} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \boldsymbol{l_{sa}} = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{sa}}+1-D-j_{sa}+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)} \sum_{j_{ik}=j_s+\boldsymbol{l_s}\,(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\cdots)}^{(\cdots)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}\,(\cdots-j_s+1)}^{n\,(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+\cdots-j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i \cdots + j_{sa}^{ik} \cdots_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i \cdots \boldsymbol{n} - I)! \cdot (\cdots + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \ge \cdots < n \wedge \boldsymbol{l_s} > D \cdots \boldsymbol{n} + 1 \wedge$

$\cdots \le j_s \le \cdots - j_{sa}^{ik} + 1 \wedge \cdots + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \cdots - j_{sa}^{ik} \cdots \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \cdots = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \ge \boldsymbol{n} \cdots n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-j_{sa}^{ik}+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)} \sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}}^{(} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-}^{} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+}^{(\ )} \sum_{j_{ik}\ (n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + \quad + j_{sa}^{ik} \quad j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \quad - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\quad > \quad < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\cdots+\boldsymbol{n}-D)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\cdots)} \sum_{(\cdots=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\cdots)}
$$

$$
\sum_{}^{(j_s+1)}
$$

$$
\sum_{n_{i}+\mathbb{k}}^{} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{}
$$

$$
\sum_{n_{ik}=n_{is}+}^{(\ )} \sum_{j_{ik}\ (n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{}
$$

$$
\frac{\cdots + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\geq \boldsymbol{n} < \cdots \wedge \boldsymbol{l_s} > D - \cdots + 1 \wedge$

$2 \leq j_{\cdots} \leq j_{ik} - \cdots \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \cdots \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\cdots - j_{sa}^{ik} \cdots = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-s+1)} \sum_{} \sum_{(j_{ik}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})} \sum_{(} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)} \sum_{(} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{+ j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\geq \boldsymbol{n} < \wedge \boldsymbol{l_s} > D - + 1 \wedge$

$2 \leq j \leq j_{ik} - \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - ^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$- j_{sa}^{ik} = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=}^{D-\boldsymbol{n}+1} \sum_{(\boldsymbol{l_{ik}} \quad -j_{sa}^{ik}+2)}$$

$$\sum_{=\boldsymbol{l_i}+\boldsymbol{n}-s+1)} \sum_{(\quad)}$$

$$\sum_{+\boldsymbol{l_{ik}}-\boldsymbol{l_s}\ (\quad=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})} \sum_{(\quad)}$$

$$\sum_{n_i \quad +\mathbb{k}\ (n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{n} \sum_{(\quad+1)}$$

$$\sum_{j_{ik}=n_{is}\quad -j_{ik}\ (n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s})!}{(n_i-\boldsymbol{n}+I)! \cdot (\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s})!} \cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)! \cdot (j_s-2)!} \cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})! \cdot (\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \quad + 1 \wedge$

$2 \leq j_{ik} \leq j_{ik} - j_{sa} \quad \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$- j^{ik} \quad 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}}^{(\boldsymbol{l_s}-\quad+1)} \quad +1)
$$

$$
\sum_{j_{ik}=\quad+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\ )} \quad \boldsymbol{a}-\boldsymbol{l_{ik}})
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n_{\quad}} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(\quad + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \quad - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \quad < n \wedge \boldsymbol{l_s} \quad \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{sa} \quad _{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-k+1)}^{(\boldsymbol{l_i}-k-\boldsymbol{l_{sa}}+2)} \sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\quad)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \quad - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \quad < n \wedge \boldsymbol{l_s} \quad \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{sa} \quad _{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} \sum_{(j_s = \boldsymbol{l_{sa}} + \boldsymbol{n} - D -} \sum_{j_{ik} = \boldsymbol{l_{ik}} + \boldsymbol{l_{ik}} - \boldsymbol{l_s} (} \sum_{} \sum_{n_i = \boldsymbol{n} + \mathbb{k}} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})} $$

$$ \frac{\left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot $$

$$ \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot $$

$$ \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!} $$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} = \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$+ j_{} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_s}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_s})} \sum_{j_{ik}=j_s+\boldsymbol{l_s}}^{(\boldsymbol{l_s})} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\boldsymbol{l_s})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq \boldsymbol{l_s} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s-\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_i}-\boldsymbol{n}+\boldsymbol{n}-D-j_{sa}^{ik}+1)} \sum_{j_{ik}=j_s+\boldsymbol{l_i}-\boldsymbol{n}-D-k}^{(\boldsymbol{l_i}-\boldsymbol{n}+\boldsymbol{n}-D-k)} \cdot \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(D-\boldsymbol{l_i}+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$< j_{sa}^{i} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, J}^{DSD} \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_{sa}-k-j_{sa}+2)} \sum_{\left(j_{sa}^{ik}+1\right)}
$$

$$
\sum_{j_{ik}} \sum_{+\boldsymbol{l_{ik}}-\boldsymbol{l_s}\,(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\boldsymbol{> n} \ldots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz S_{j_s}^{D} {}^{j^{sa}} = \sum_{k=} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j_{sa}^{ik}+1)} \sum_{j_{ik}=\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\ )} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fz^{SD}_{j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_s} + \boldsymbol{n} - D)}^{(\boldsymbol{l_i} - k - s + 2)} \sum_{j_{ik} = j_s + \boldsymbol{l_{ik}} - \boldsymbol{l_s}} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$fz S_{j_s}^{D} {}_{j^{sa}} = \sum_{k=\square}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_s}+\boldsymbol{n}-D)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s}^{\boldsymbol{n}} {}_{i^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_s}+\boldsymbol{n}-D)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)} \sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!} $$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik} = j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_{sa}}-k+1)} \left(j^{sa} = \boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s\right)
$$

$$
\sum_{n_i = \boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i - j_s+1)}
$$

$$
\sum_{n_{ik} = n_{is}+j_s-j_{ik}}^{(\ )} \left(n_{sa} = n_{ik}+j_{ik}-j^{sa}-\mathbb{k}\right)
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s > \boldsymbol{l_{sa}} \wedge$

$D+s-\boldsymbol{n} < \boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1) \vee$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa} \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s}=s-\mathbb{k} \wedge$

$\mathbb{k}_z: z=1) \Big) \Rightarrow$

$$f_z S_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k)!\cdot(\ -2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$\big((D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}})\vee$

$(D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i}\leq D+\boldsymbol{l_s}+s-(\boldsymbol{n}+1)\big)\wedge$

$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}=j^{sa}+j^{ik}_{sa}-j_{sa}} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j^{ik}_{sa}+1)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}} \sum^{(j_s+1)}
$$

$$
\sum_{n_{ik}} \sum^{(\ )}_{(n_{sa}=\ j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{(n_i + j^{ik}_{sa} - s - 1)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{ik} - j_{ik} - s - j^{s}_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \wedge j_s + j^{ik}_{sa} - 1 \leq \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq \leq \boldsymbol{n} - s \wedge$

$\boldsymbol{l_{ik}} - j_{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \wedge \boldsymbol{l_s} \leq D - + 1 \wedge$

$1 \leq \wedge j_{ik} - j_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$j_{ik} - 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}} \sum_{+j_{sa}^{ik}-j_{sa}} \sum_{=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$j_{ik} \leq j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz S_{j_s, j_{ik}, j}^{DSD} \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{l_i}} \sum_{(\quad+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\quad)} \sum_{j_{ik}=j^{sa}\quad-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fz S_{j_s, j_{ik}, J}^{DSD} \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{l_i}} \sum_{(j_{sa}=\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik}=j^{sa}+j_{sa}-j_{sa}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$(D > 1 \ldots n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s+\mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$\mathcal{S}_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_s}+j_{sa}-k)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)!}.$$

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$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa}$ $\wedge j_{sa}^{s} \leq j_{sa}^{ik}$ $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3$ $\wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge$ $= \mathbb{k} >$ $\wedge$

j_{sa} $j_{sa}^{i} - 1 \wedge j_{sa}^{ik}$ $j_{sa} - 1 \wedge$ $\leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s$ $\wedge$

$\mathbb{k}_z, z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{(\boldsymbol{l_s} + j_{sa} - k)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k)!\cdot(\ -2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$\big((D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}})\vee$

$(D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}\wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i}\leq D+\boldsymbol{l_s}+s-(\boldsymbol{n}+1)\big)\wedge$

$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j^{ik}_{sa}-D-s}^{\boldsymbol{l_{sa}}+j^{ik}_{sa}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}}}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(\ \ \ j_s+1)}^{(\ \ \ j_s+1)}
$$

$$
\sum_{n_{ik}=\ \ \ }^{\ \ \ } \sum_{(n_{sa}=\ \ \ j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i - \ \ \ + j^{ik}_{sa} - \ \ \ k - s - 1\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + \ \ \ - j_{ik} - s - j^{s}_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - \ \ \ j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D + \ \ \ \boldsymbol{l_i})!}{(D + j^{sa} + \ \ \ - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \ \ \ \wedge j_s + j^{ik}_{sa} - 1 \leq \ \ \ \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} - \ \ \ \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \ \ \ + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \ \ \ \wedge \boldsymbol{l_s} \leq D - \ \ \ + 1 \wedge$

$1 \leq \ \ \ \leq j_{ik} - j_{sa} - 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \ \ \ \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\ \ \ - 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_i}-s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}=k+1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{is}=\boldsymbol{n}+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$< j \quad {}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

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$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$\binom{DSD}{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{\binom{}{}}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{\binom{}{}}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{\binom{}{}}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+s-\boldsymbol{n} < \boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik} =$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}$ [illegible] $\cdots, j_{sa}^{i}\}$

$s >$ [illegible] $\boldsymbol{s} = s+\mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big)$ [illegible]

$$fz S_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \wedge$

$$_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum^{(\ )}_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum^{(\ )}_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_s}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{\cdot} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_{\cdot}}-j_{sa}-s= \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s \geq 3 \wedge \boldsymbol{s}=$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}\right\} \wedge$

$s \geq 4 \wedge s=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1) \Rightarrow$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}}\ \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+\ -j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-\ -j_{sa}^{\ }\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+\ ^{ik}_{sa}-j_{ik}-\ ^{\ s}_{sa}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}\ -1)!}{\ \ k+\ \ !\cdot(j_s-2)!}\cdot$$

$$\frac{(\ \ -\boldsymbol{l_i})!}{(D+j^{sa}-\ \ -\boldsymbol{l_{sa}})!\ \ +\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + \ \ \leq j_{ik} + j_{sa}^{ik} - j\ \ \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}\ \ - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - \ \ > \boldsymbol{l_{ik}} \wedge \boldsymbol{l}\ \ j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \ \ < n \wedge \boldsymbol{l_s} \leq \ \ - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - \ \ + 1 \wedge j\ \ + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik}\ \ _{sa} - j_{sa}^{ik} \leq j^{s}\ \ \boldsymbol{n} + j_{sa}\ \ s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik}\ \ 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}\ \ j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s\ \ \boldsymbol{n} < \boldsymbol{l_i}\ \ \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n}\ \ \wedge I = \mathbb{k} = 0 \wedge$

$\ \ < j^{i}\ \ 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\cdots+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-\cdots}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-\cdots)}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}\,(n_{is}=\cdots-j_s+1)}^{n} \sum^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+\cdots j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + \cdots + j_{sa}^{ik} \cdots j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i \cdots - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D \cdots j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \ge \cdots < n \wedge \boldsymbol{l_s} > D \cdots \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{\cdots} - j_{sa}^{ik} + 1 \wedge \cdots + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \cdots - j_{sa}^{ik} \le \cdots \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \cdots > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\cdots > \cdots < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} \sum_{(j_s = j_{ik} \; ^{ik}_{sa}+1)}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \; \sum_{j_{ik} \; -D-s \; (} \sum_{j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{\boldsymbol{l_s}+j_{sa}^{ik}-} \; \sum_{n_i=} \sum_{\mathbb{k} \; (n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{n} \; \sum_{=n_i} \sum_{-j_{ik} \; (n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\;)}
$$

$$
\frac{(\quad + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} \quad + I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$((D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge$

$2 \leq \quad j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-I} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )} \sum_{j_{ik} = \boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa} = j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{n_i = \boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is}+j_s-j_{ik}} \sum_{(n_{sa} = n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - \cdots \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s +$

$\mathbb{k} \cdot z = 1))$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)} \sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} $$

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$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_s} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s \geq 3 \wedge \boldsymbol{s} = \vee$

$(D \geq \boldsymbol{n} < n \wedge I = > 0 \wedge$

$j_{sa} \leq j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}, j_{sa}, \cdots, j_{sa}\} \wedge$

$s \geq 4 \wedge = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1}{(\boldsymbol{l_s} - j_s - k)! \cdot (\quad - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l} - j_{sa})! \cdot (\boldsymbol{n} - j_{sa} - j^{sa} -}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j^{ik}_{sa}+2)}
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\quad)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}} \sum_{(\quad+j_s+1)}^{n}
$$

$$
\sum_{n_{ik}=} \sum_{(n_{sa}=n_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{(n_i - + j^{ik}_{sa} - - s - 1 -)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + - j_{ik} - s - j^{s}_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \wedge j_s + j^{ik}_{sa} - 1 \leq \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq \leq \boldsymbol{n} - s \wedge$

$\boldsymbol{l_{ik}} - + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \wedge \boldsymbol{l_s} \leq D - + 1 \wedge$

$1 \leq \wedge j_{ik} - j_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}} \sum_{\boldsymbol{n}-\boldsymbol{l_i}} \left(\boldsymbol{l_{ik}} \right.
$$

$$
\sum_{\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)} \sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}} \left. 2\right)
$$

$$
\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$j_{ik} \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fz\,S_{j_s, j_{ik}, j^{sa}}^{DSD} \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-} \sum_{D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}} \sum_{j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}}}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\boldsymbol{n} < \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}}^{DSD} \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-} \sum_{D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}+\boldsymbol{l_{ik}}-\boldsymbol{l_s}\ (j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$(D > \quad n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_{ik}, j^{sa}}^{D} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s+\mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$f^{SD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)!}\cdot$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1>\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}})\vee$

$(D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1>\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i}\leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)\vee$

$\big((D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge \boldsymbol{s}=s)\vee$

$(D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge \boldsymbol{s}=s\wedge\mathbb{k}\wedge$

$\mathbb{k}_z:z=1)\Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}}\ \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}\ \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$D+j_{sa}-\boldsymbol{n} < \boldsymbol{l_{sa}} < D+\boldsymbol{l_s}-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+j^{ik}_{sa}-j_{sa}}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j^{ik}_{sa}+1)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{}^{(\quad j_s+1)}
$$

$$
\sum_{n_{ik}}^{} \sum_{(n_{sa}=\quad j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i - \quad + j^{ik}_{sa} \quad - s - 1 \quad)!}{(n_i - \boldsymbol{n} - I)! \quad \boldsymbol{n} + j_s + \quad j_{ik} - j_{ik} - s - j^{s}_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D \quad j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \leq \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad \leq j^{sa} \leq \boldsymbol{n} \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} \quad + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l} \quad + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} \leq D - \quad + 1 \wedge$

$1 \leq \quad j_{ik} - j_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+\cdots-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})} \sum_{j_{\cdots}^{\cdots} + j_{sa}^{ik} - j_{sa}^{ik}+1)} \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < \cdots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

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$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fz^{SD}_{j_{ik}, j^{sa}} = \sum_{k=1}^{j_s + j_{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(\boldsymbol{l_s} + j_{sa} - k)} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )} \frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+j_{sa}-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik} =$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k},$ [illegible] $\cdots, j_{sa}^{i}\}$

$s >$ [illegible] $\boldsymbol{s} = s+\mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big)$ [illegible]

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )} \sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{n} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} (n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\vee$

$(D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$D+j_{sa}-\boldsymbol{n}<\boldsymbol{l_{sa}}\leq D+\boldsymbol{l_s}+j_{sa}-1)\wedge$

$\big((D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge \boldsymbol{s}=s+\mathbb{k}\wedge$

$(D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge \boldsymbol{s}=s+\mathbb{k}\wedge$

$\mathbb{k}_z:z=1)\big)\Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+j^{ik}_{sa}-j_{sa}} \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D)}^{(\boldsymbol{l_s}+j_{sa}-k)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{ia}=n_{ik}+j_{ik}-j^{sa})}^{(\ )}
$$

$$
\frac{(n_i + j_s - \quad - s - \quad - j^s_{sa})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} - j_s + j_{sa} - \quad - j^s_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\quad - j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad - \boldsymbol{l_i})!}{(D + \quad - \boldsymbol{n} - \boldsymbol{l}\quad)! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{sa} + \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \quad \wedge \boldsymbol{l_{sa}} + \quad - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{sa} + \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \quad > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\quad + j_{sa} \quad < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum^{(\quad)} \sum^{(j_s=j_{ik}} \sum^{(\boldsymbol{l_s}+j_{sa}-k)} \sum^{(j_{ik}} \sum^{(n_i-j_s+1)} \sum^{n_i=\boldsymbol{n}+\mathbb{k}} \sum^{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)} \sum^{(\quad)} \sum^{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D > \boldsymbol{n} < n \wedge j_s \leq j_{ik} - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, \ldots}^{DSI\ldots} = \sum_{k=1}^{D+\boldsymbol{l_s}-j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{s} \cdots, j_{sa}^{i}\} \wedge$

$s \geq 4 \wedge \boldsymbol{s} = \mathbb{k} \wedge$

$\mathbb{k}_z = 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} $$

$$ \sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} $$

$$ \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} $$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - 1) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j^{ik}_{sa}-D-s}^{\boldsymbol{l_s}+j^{ik}_{sa}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{(n_i+j_s \quad -s \quad -j^s_{sa})!}{(n_i \quad \boldsymbol{n} \quad)! \cdot (\boldsymbol{n} \quad _i+j_{sa} \quad -j^s_{sa})!} \cdot
$$

$$
\frac{\quad -k-1)!}{-j_s \quad +1)! \cdot (j_s-2)!} \cdot
$$

$$
\frac{(\quad -\boldsymbol{l_i})!}{(D+j_{sa} \quad -\boldsymbol{n}-\boldsymbol{l_{sa}})! \cdot (\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n} \quad 1 \wedge$

$2 \leq j_s \leq j_{ik}-j^{ik}_{sa}+1 \wedge j_s+j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a+j^{ik}_{sa}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j^{ik}_{sa}+1 > \quad \wedge \boldsymbol{l_{sa}}+j^{ik}_{sa}-j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \quad < n \wedge \boldsymbol{l_s} \leq D \quad \boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j \quad -j^{ik}_{sa}+1 \wedge \quad s+j^{ik}_{sa}-1 \leq j_{ik} \leq j^{sa}+j^{ik}_{sa}-j_{sa} \wedge$

$j_{ik}+ \quad -j^{ik}_{sa} \leq j \quad \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j^{ik}_{sa}+ \quad > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j^{ik}_{sa}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$j \quad < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j^i_{sa}-1 \wedge j^{ik}_{sa}=j_{sa}-1 \wedge j^s_{sa} \leq j^{ik}_{sa}-1 \wedge$

$\boldsymbol{s}: \{j^s_{sa},\cdots,j^{ik}_{sa},j_{sa},\cdots,j^i_{sa}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \left(\right)
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+j_{sa}^{ik}-D-s}^{j_s+j_{sa}^{ik}-k} \left(\right) \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{\left(\right)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{\left(\right)}
$$

$$
\frac{\left(+ j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{ - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \quad < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i} \quad j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad \quad j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$S_{j_s, j_{ik}, \ldots}^{DSI} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{s} \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = \mathbb{k} \wedge$

$\mathbb{k}_z = 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )} $$

$$ \sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )} $$

$$ \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} $$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\vee$

$(D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$D+j_{sa}-\boldsymbol{n}<\boldsymbol{l_{sa}}\leq D+\boldsymbol{l_s}+j_{sa}-1)\wedge$

$\big((D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge \boldsymbol{s}=s+\mathbb{k}\wedge$

$(D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge \boldsymbol{s}=s+\mathbb{k}\wedge$

$\mathbb{k}_z:z=1)\big)\Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j^{ik}_{sa}+2)}
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum^{(\ )}_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum^{(n_i-j_s+1)}_{(n_{is}=\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{=n_{ik}+j_{ik}-j^{sa}}
$$

$$
\frac{(n_i+j_s-\quad-s-\quad-j^s_{sa})!}{(n_i-\boldsymbol{n}\quad)!\cdot(\boldsymbol{n}\quad+j^s_{sa}\quad-j^s_{sa})!}\cdot
$$

$$
\frac{\quad-k-1)!}{-j_s-\quad+1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(\quad-\boldsymbol{l_i})!}{(D+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n}\quad 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa}\quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad^{ik}_{sa} \leq j^{sa}\quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + \quad - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \quad < n \wedge \boldsymbol{l_s} \leq D\quad \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{sa}\quad \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\quad < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-\cdots+1)}^{(\boldsymbol{l_{ik}}-k-\cdots+2)} \sum_{j_{ik}=\cdots+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\ \ )} \sum_{(\cdots=j_{sa}^{ik})}^{(\ \ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(\ \ )}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{(\cdots + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{\cdots - I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \cdots < n \wedge \boldsymbol{l_s} \cdots D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i} \cdots j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\cdots j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$\sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum^{(\ )}_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{s} \cdots, j_{sa}^{i}\} \wedge$

$s \geq 4 \wedge \boldsymbol{s} = \mathbb{k} \wedge$

$\mathbb{k}_z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s -$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} -$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - 1) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s +$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\ \ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}} \sum_{(n_{is}=\ \mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{ik}+j_{ik}-j^{sa})}^{(\ \ )}
$$

$$
\frac{(n_i+j_s \quad -s- \quad -j^s_{sa})!}{(n_i \quad \boldsymbol{n}- \quad l)!\cdot(\boldsymbol{n} \quad j_s+j_{sa} \quad -j^s_{sa})!}\cdot
$$

$$
\frac{\boldsymbol{l_s}-k-1)!}{-j_s- \quad +1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(\quad -\boldsymbol{l_i})!}{(D+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

$$
\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{ } 1 \wedge
$$

$$
2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad ^{a} + j^{ik}_{sa} - j_{sa} \wedge
$$

$$
j_{ik} + \quad - j^{ik}_{sa} \leq j^{s} \quad \boldsymbol{n} + j_{sa} - s \wedge
$$

$$
\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \quad \wedge \boldsymbol{l_{sa}} + \quad ^{ik} - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee
$$

$$
(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq \quad \boldsymbol{n} + 1
$$

$$
\quad \leq j_s \leq \quad - j^{ik}_{sa} + 1 \wedge \quad _s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge
$$

$$
j_{ik} + \quad - j^{ik}_{sa} \quad \quad \leq \boldsymbol{n} + j_{sa} - s \wedge
$$

$$
\boldsymbol{l_{ik}} - j^{ik}_{sa} + \quad > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge
$$

$$
\quad + j_{sa} \quad < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge
$$

$$
\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge
$$

$$
j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge
$$

$$
\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge
$$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\quad)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(\quad + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \quad - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D > \boldsymbol{n} < n \wedge \quad - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$\sum_{j_s, j_{ik}, J}^{DSD} \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}^{(\boldsymbol{l_s} + j_{sa} - k)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_s + j_{sa}^{ik} - j_{ik} - s - I - j_{sa}^{s}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_s + j_{sa}^{ik} - j_{ik} - s - j_{sa}^{s}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge$ $\leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{s}^{s}$ $\cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}$ $, j_{sa}^{i}\} \wedge$

s $4 \wedge \boldsymbol{s} = s$ $\mathbb{k} \wedge$

$\mathbb{k}_z$ $= 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )} $$

$$ \sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )} $$

$$ \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} $$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_s+j_{sa}^{ik}-j_{ik}-s-I-j_{sa}^{s}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_s+j_{sa}^{ik}-j_{ik}-s-j_{sa}^{s}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1>\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\vee$

$(D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1>\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$D+j^{ik}-\boldsymbol{n}<\boldsymbol{l_{ik}}\leq D+\boldsymbol{l_s}+j_{sa}^{ik}-1\big)\wedge$

$\big(D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge \boldsymbol{s}=s\big)\vee$

$(D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge \boldsymbol{s}=s+\mathbb{k}\wedge$

$\mathbb{k}_z:z=1\big)\Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j^{ik}_{sa}+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+j^{ik}_{sa}-1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l}}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{(n_i + j_s - s - j^s_{sa})!}{(n_i - \boldsymbol{n} + j_{sa} - j^s_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(j_s - \boldsymbol{l_{ik}} + \boldsymbol{n} - D - j^{ik}_{sa} + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\boldsymbol{l_i} - \boldsymbol{l_i})!}{(D + j_{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$\boldsymbol{l_{sa}} > D + \boldsymbol{l_{ik}} + j_{sa} - \boldsymbol{n} - j^{ik}_{sa} \wedge \boldsymbol{l_i} > D + \boldsymbol{l_{sa}} + s - \boldsymbol{n} - j_{sa}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$\boldsymbol{l_{ik}} > D + \boldsymbol{l_s} + j^{ik}_{sa} - \boldsymbol{n} - 1 \wedge \boldsymbol{l_i} > D + \boldsymbol{l_{sa}} + s - \boldsymbol{n} - j_{sa}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa} + 1 > \boldsymbol{l_s} \wedge$

$\boldsymbol{l_{sa}} > D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1 \wedge \boldsymbol{l_i} > D + \boldsymbol{l_{sa}} + s - \boldsymbol{n} - j_{sa}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_i} > D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} -$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{s}^{i}$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$${}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = 0$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > \quad - \boldsymbol{n} + 1$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=1}^{(\ \ )} \sum_{-j_{sa}^{ik}+1)}
$$

$$
\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{{}^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}\,(n_{is}} \sum^{(n_i-j_s+1)} {}_{-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+} \sum_{j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}
$$

$$
\frac{\left(n_i + j^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \le j_{} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D > \quad < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{D-\boldsymbol{n}+1} \sum_{(\boldsymbol{l_{sa}} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{n} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})} \frac{(n_i - \boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} + I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_{ik} - j_{sa} \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$j_{sa}^{ik} - 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\boldsymbol{l_{ik}} - k - j_{sa}^{ik} + 1)} \sum_{j^{sa} + j_{sa}^{ik}}^{(j^{sa} = \boldsymbol{l_{ik}} + 1 - k - j_{sa}^{ik})} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\quad)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(\boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq$ [illegible] $n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i}$ [illegible] $j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

j [illegible] $j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=\cdots}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}
$$

$$
\sum_{j_{ik}=\cdots + j_{sa}^{ik} - j_{sa}} \sum_{{}^{sa} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz \sum_{j_s=1}^{D-1} \sum_{j_{sa}^{ik}=1}^{(\ )} \sum_{j_{ik}=j^{sa}+j_{sa}-j_{sa}}^{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\boldsymbol{n} \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{(\quad)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

$$(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik} + 1)$$

$$\sum_{=j^{sa}+} \sum_{-j_{sa}} (j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s}^{\,j_{ik}\,j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\quad)}
$$

$$
\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{(\boldsymbol{l_s} + j_{sa} - k)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}^{(\boldsymbol{l_i} + j_{sa} - k - s + 1)} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$\mathcal{S}_{\dots}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik} + 1)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}^{(\boldsymbol{l_s} + j_{sa} - k)}
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}
\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_i}+j_{sa}-k-s+1)}\sum_{(j^{sa}=\boldsymbol{l_{ik}}+\boldsymbol{n}+j_{sa}-D-j_{sa}^{ik})}
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
\frac{\big(n_i+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}\big)!}\cdot
$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_{sa}}-k+1)}\sum_{(j^{sa}=\boldsymbol{l_{ik}}+\boldsymbol{n}+j_{sa}-D-j_{sa}^{ik})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

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$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq$ $^{ik}_{a} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} =$ $+ \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}^{(\boldsymbol{l_s} + j_{sa} - k)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_s-s=\boldsymbol{l_s}\wedge$

$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa}^{s}\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$

$\mathbb{k}_z:z=1)\big)$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}\sum_{(j^{sa}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}-D-1)}^{(\boldsymbol{l_i}+j_{sa}-k-s+1)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1}{(\boldsymbol{l_s} - j_s - k)! \cdot (\quad - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_{sa}} - j_{sa})! \cdot (\boldsymbol{n} - j_{sa} - j^{sa} -}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa}$ $_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j$ $= \boldsymbol{l_{ik}} \wedge \boldsymbol{l}$ $j_{sa} - s =$ $\wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge$ $_{s} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa},$ $j_{sa}^{i}\} \wedge$

s $3 \wedge \boldsymbol{s} =$ $\wedge$

$(D$ $\boldsymbol{n} < n \wedge I =$ $> 0 \wedge$

$j_{sa} \leq j_{sa}$ $1 \wedge j_{sa}^{ik} = j_{s}$ $1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{i}$ $j_{sa}\} \wedge$

s $4 \wedge$ $s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1) \Rightarrow$

$$_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

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$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_{sa}}-k+1)} \sum_{(j^{sa}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}-D-1)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_{s}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+}^{(\ )} {}_{-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}^{s}-j_s-\right.^{ik}_{sa}-1\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}^{i}+j_{sa}^{s}-j_s-\right.^{ik}_{sa}\big)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-1)!}{(D+j^{sa}+s-\boldsymbol{n}-1-j_{sa})!\,(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j^{ik}_{sa} \leq j_{ik} \leq j_{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-1=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_{sa}}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I \leq 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge \mathbb{k} \neq 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s+\mathbb{k} \wedge$

$\mathbb{k}_z : z = 1\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}-j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+j^{ik}_{sa}-j_{sa}} \sum_{(j^{sa}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}-D}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j^{ik}_{sa}+1)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{(n_i + j_{ik} \quad - s - \quad - I)!}{(n_i - \boldsymbol{n} \quad)! \cdot (\boldsymbol{n} \quad + j^{sa} \quad - j^{ik}_{sa})!} \cdot
$$

$$
\frac{\quad - k - 1)!}{\quad - j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \quad)!}{(D + \quad + s - \quad - \boldsymbol{l_i} - \quad)! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + \quad \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + \quad - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \quad \boldsymbol{n} < n \wedge I = \mathbb{k} \quad 0 \wedge$

$j_{sa} \leq j^{i}_{sa} \quad \wedge j^{ik}_{sa} = j_{s} \quad - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s} \quad j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = \quad) \vee$

$\quad n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j^{ik}_{sa} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_i} + j^{ik}_{sa} - k - s + 1}^{\boldsymbol{l_i} + j^{ik}_{sa} - k - s + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j^{ik}_{sa})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(\quad + j_s + 1)}^{(\quad + j_s + 1)}
$$

$$
n_{ik} \quad + j_s \sum_{(\quad = n_i \quad - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i + \quad + j^s_{sa} \quad - s - j_{sa} \quad)!}{(n_i - \boldsymbol{n} - I)! \quad + j_{ik} \quad - j_s - s - j^{ik}_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad \boldsymbol{l_i})!}{(D + j^{sa} + \quad - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \leq \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad {}^{sa} \leq \boldsymbol{n} \quad - s$

$\boldsymbol{l_{ik}} \quad {}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_i} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < \quad \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \quad - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j \quad j_{sa}, \cdots, j^i_{sa}\} \wedge$

$\quad = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j^{ik}_{sa} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j^{ik}_{sa} - D - j_{sa}}^{\boldsymbol{l_{sa}} + j^{ik}_{sa} - k - j_{sa} + 1} \sum_{\left(j^{sa} = j_{ik} - \right.}^{(\ )} \left. - j^{ik}_{sa}\right)
$$

$$
\sum_{n_i - \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s}^{(n_i - 1)}
$$

$$
\sum_{j_{ik} = n_{is} + j_s - }^{(\ )} \sum_{(n_{sa} = n_{ik} + \ - j^{sa} - \mathbb{k})}
$$

$$
\frac{\left(n_i + j_{ik} + \ - j_s - \ - j^{ik}_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + \ + j^{s}_{sa} - j_s - s - j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\ - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(\ + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - \ + 1 \wedge j_s - j^{ik}_{sa} - \ \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \ - j^{ik}_{sa} \leq j^{sa} - \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \ = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} - j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ < n \wedge I - \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - \ \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\{s \ \ j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} +}^{(\ \ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_{ik}}-k+1} \sum^{(\ \ )}$$

$$\sum_{=\boldsymbol{n}+\mathbb{k}\ (}^{(n_i - j_s +} \sum_{\boldsymbol{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}-} \sum_{+j_s-j_{ik}\ (=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{+ j_{ik} + j_{sa}^{s} \quad j_s - s - j_{sa}^{ik} - I)!}{-\boldsymbol{n} \quad I)! \cdot (\boldsymbol{n} + \quad + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + \quad s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad j_s + j_{sa}^{s} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad ^{ik} + 1 = \boldsymbol{l_s} - \boldsymbol{j_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < \quad \wedge I = \mathbb{k} = 0 \wedge$

$\quad < j \quad 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=2}^{(} \sum_{-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}^{ik}-D}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-}^{(}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}}^{(n_i-j_s+1)} -j_s+1)$$

$$\sum_{n_{ik}=n_{is}+} \sum_{j_{ik}}^{(} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + \quad + j^{s} \quad j_s - s - j_{sa}^{ik} - I\right)!}{(n_i \quad - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D \quad j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} \quad j_{sa}^{ik} + 1 \quad _s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} \quad _{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\quad < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{D-\boldsymbol{n}+1} \sum_{(}^{(}$$

$$\sum_{j_{ik}}^{\boldsymbol{l_{sa}} + j_{sa}^{ik} - k - j_{}^{}} \sum_{}^{(}$$

$$\sum_{n_i = \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}$$

$$\sum_{= n_{sa} - j_{ik}}^{} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(}$$

$$\frac{(\quad + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} \quad I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < \quad \boldsymbol{l_s} > D - \quad + 1 \wedge$

$2 \leq \quad j_{ik} - j_{sa} \quad 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \left(\right.
$$

$$
\sum_{(j_s = j_{ik} \; \cdots \; +1)}^{\boldsymbol{l_s}-k+1} \left(\right.
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}-j_{ik}-D-s \; (\; \cdots \; -j_{sa}^{ik})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{\left(\right.} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(\boldsymbol{l_i} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(\boldsymbol{l_i} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \; \cdots \; \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{\cdots} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\cdots + j_{\cdots} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=\cdots}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}
$$

$$
\boldsymbol{l_s} \cdots {}^{ik} - k
$$

$$
\sum_{j_{ik} \cdots \boldsymbol{n} + j_{sa}^{ik} - D \cdots} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ \ )}
$$

$$
\frac{(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \cdots \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz S_{j_s} \sum_{k} \sum_{j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{s}-D-j_{sa}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\ldots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{\quad} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)}$$

$$\sum_{\boldsymbol{l_{ik}} - \quad}^{\quad} \sum_{D - j_{sa}\ (j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\quad)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s}^{\,j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j_{sa}^{ik} - D - j_{sa}}^{\boldsymbol{l_s} + j_{sa}^{ik} -} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_{ik}} + \boldsymbol{n} - D}^{j_{sa}^{s} - k - s + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\quad)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$\left(\overset{DSD}{\underset{i\ j_{sa}}{\mathcal{S}}}\right) = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_{ik}} + \boldsymbol{n} - D}^{\boldsymbol{l_{sa}} + j_{sa}^{ik} - k - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_{ik}} + \boldsymbol{n} - D}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

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$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}^{ik}-D-1}^{\boldsymbol{l_i}+j_{sa}^{ik}-k-s+1}\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}\big)!}.$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

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$$\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}^{ik}-D-1}^{\boldsymbol{l_{sa}}+j_{sa}^{ik}-k-j_{sa}+1}\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

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$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

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$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

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$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa}^{ik} - D - 1}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

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$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_s-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

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$\boldsymbol{s}\colon\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa}^{s},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \wedge$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_i}-k-s+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{\left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

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$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_{ik}}-j_{sa}-s=$

$\left((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s \geq 3 \wedge \boldsymbol{s}=$

$(D \geq \boldsymbol{n} < n \wedge I=$

$j_{sa} \leq j_{sa}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}\right\} \wedge$

$s \geq 4 \wedge s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\ \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{n_{is}=\boldsymbol{n}+\mathbb{k}-j_s}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{n_{sa}=n_{ik}+}$$

$$\frac{(n_i+j_{ik}+j_{sa}^{s}-j_s-$$

$$\frac{(\boldsymbol{l_s}$$

$$\frac{(D-$$

$$\frac{(D-$$

$$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$$

$$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j^{ik}$$

$$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}$$

$$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}$$

$$\big((D \geq \boldsymbol{n} < n \wedge I =$$

$$j_{sa}^{s} \leq j_{sa}^{i}-1 \wedge$$

$$\boldsymbol{s}: \{$$

$$> 3 \wedge$$

$$(D \geq$$

$$j_{sa}^{s} \leq j_{sa}^{i}$$

$$\{j_{sa}^{s},$$

$$s > 4 \wedge \boldsymbol{s} = s+\mathbb{k} \wedge$$

$$\mathbb{k}_z: z=1\big) \Rightarrow$$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j^{ik}_{sa}+1)}^{(\boldsymbol{l_{ik}}-k-j^{ik}_{sa}+2)}
$$

$$
\sum_{j_{ik}=j_s+j^{ik}_{sa}-1} \left(\sum_{j^{sa}=j_{ik}+j_{sa}-}^{(\ \ )}\right.
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \left(\sum_{n_{is}=}^{(n_i-j_s+1)}\right.
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \left(\sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ \ )}\right.
$$

$$
\frac{(n_i + j_{ik} \quad _a - s - \quad - I)!}{(n_i - \boldsymbol{n} \quad)! \cdot (\boldsymbol{n} \quad _{,} + j^{s}_{sa} \quad - j^{ik}_{sa})!} \cdot
$$

$$
\frac{- k - 1)!}{(\quad - j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \quad)!}{(D + \quad + s - \quad - \boldsymbol{l_i} - \quad)! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + \quad \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + \quad - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\left((D \quad \boldsymbol{n} < n \wedge I = \mathbb{k} \quad 0 \wedge\right.$

$j_{sa} \leq j^{i}_{sa} \quad \wedge j^{ik}_{sa} = j_s \quad - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j \quad j^{ik}_{sa}, j_{sa}, \quad , j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = \quad) \vee$

$\quad n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_s}+\boldsymbol{n}-D)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(\quad)}
$$

$$
\sum_{n_i=\boldsymbol{n}+} \sum_{(\quad j_s+1)}^{n}
$$

$$
\sum_{n_{ik}=} \sum_{(n_{sa}=\quad j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{(n_i \quad j_{ik} + j_{sa}^{s} \quad j_s - s - j_{sa})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} \quad j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D \quad \boldsymbol{l_i})!}{(D + j^{sa} \quad - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \geq D - \boldsymbol{n} + 1 \wedge$

$2 \leq j \leq j_{ik} - j_{sa}^{ik} + \quad \wedge j_s + j_{sa}^{ik} - 1 \quad \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \quad ^{sa} \leq \boldsymbol{n} \quad _{sa} - s \wedge$

$\boldsymbol{l_{ik}} \quad _{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \quad + j_{sa}^{ik} \quad _{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D \geq \boldsymbol{n} \quad n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq \quad - 1 \wedge j_{sa} \quad j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j \quad j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$3 \wedge \quad - s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)
$$

$$
\sum^{(n_i-\ +1)}
$$

$$
\sum^{n_i+\mathbb{k}} \left(n_{is}=\boldsymbol{n}+\mathbb{k}-j_{sa}\right)
$$

$$
\sum^{(\ )}
$$

$$
\sum^{} \left(n_{sa}=n_{ik}-\mathbb{k}\right)
$$

$$
\frac{\left(n_i + j_{ik} - j_{sa}^{s} - j_s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} - j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\ - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(\ + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \ < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - \ + 1 \wedge j_{sa}^{s} - j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} - \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} - 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} - j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D > \boldsymbol{n} < n \wedge \ = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - \ \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\{j^{s} \ , j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{} \sum_{}^{} \sum_{=\boldsymbol{n}+\mathbb{k}}^{} \sum_{}^{\boldsymbol{n}+\mathbb{k}-j_s+1)} \sum_{n_{ik}-}^{} \sum_{}^{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{+ j_{ik} + j_{sa}^{s} \; j_s - s - j_{sa}^{ik} - I)!}{- \boldsymbol{n} \; !) \cdot (\boldsymbol{n} + + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + \; s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \; D - \boldsymbol{n} \; 1 \wedge$

$2 \leq \; \leq j_{ik} - j_{sa}^{ik} + \; j_s + j_{sa}^{s} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \; ^{ik} \leq j^{sa} \leq \; + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \; + 1 = \boldsymbol{l_s} - \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < \; \wedge I = \mathbb{k} = 0 \wedge$

$\; - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_i}} ^{(\boldsymbol{l_s}-k+1)} \sum_{-D-s+1)} $$

$$ \sum_{j_{ik}=j_s+j_{s} \cdots} \sum_{(j^{sa}=j_{ik}+j_{sa} \cdots)} ^{(} $$

$$ \sum_{n_i=\boldsymbol{n}+\mathbb{k}\,(\cdots} ^{n} \sum_{-j_s+1)} ^{(n_i-j_s+1)} $$

$$ \sum_{n_{ik}=n_{is}+\cdots j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})} ^{(\ )} $$

$$ \frac{\left(n_i \cdots + j_s^s \cdots j_s - s - j_{sa}^{ik} - I\right)!}{(n_i \cdots - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot $$

$$ \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot $$

$$ \frac{(D - \boldsymbol{l_i})!}{(D \cdots j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!} $$

$D \ge \cdots < n \wedge \boldsymbol{l_s} > D \cdots \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j \cdots - j_{sa}^{ik} + 1 \wedge \cdots + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \cdots - j_{sa}^{ik} \cdots \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \cdots = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D > \cdots n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(\boldsymbol{l_i}-\quad s+2)}^{} \sum_{\boldsymbol{l_{sa}}+\boldsymbol{n}-\quad j_{sa}+1)}^{}
$$

$$
\sum_{\quad + j_{sa}^{ik}-1}^{} \sum_{(\quad j_{ik}+j_{sa}-j_{sa}^{ik})}^{}
$$

$$
\sum_{n_i}^{n} \sum_{+\mathbb{k}\,(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(\quad i+1)}
$$

$$
\sum_{j_{ik}=n_{is}}^{} \sum_{-j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{+ j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} + I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \quad + 1 \wedge$

$2 \leq j_{ik} - j_{sa} \quad \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad - j^{ik} \quad 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=\cdots}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-\cdots+1)}^{(\boldsymbol{l_{ik}}-k-\cdots+2)} \sum_{j_{ik}=\cdots+j_{sa}^{ik}-1}^{(\ \ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ \ )} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(\ \ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}
$$

$$
\frac{\left(\cdots + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{\cdots - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \cdots < n \wedge \boldsymbol{l_s} \cdots - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{\cdots} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\cdots + j_{\cdots} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s-1+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_s}} \sum_{j_{ik}=j_s+j_{sa}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$< j_{ik} \leq j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, J}^{DSD} \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(s \ldots - j_{sa}^{ik}+1)}^{(\boldsymbol{l_i}-k-s+2)} \sum_{j_{ik}=\ldots+j_{sa}^{ik}-1}^{(\ )} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})} \frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!} $$

$\ldots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s}^{D\ j^{sa}} = \sum_{k=1}^{D-n} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_{sa}}\ j_{sa}+2)}
$$

$$
\sum_{j_{ik}=}^{} \sum_{j_{sa}^{ik}-1\ (j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}}^{DSD} = \sum_{k=1}^{\boldsymbol{l_s}+1} \sum_{(j_s=\boldsymbol{l_s}+\boldsymbol{n}-D)}^{(\boldsymbol{l_i}-k-s+2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$S_{i\ j\ i}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_s} + \boldsymbol{n} - D)}^{(\boldsymbol{l_{sa}} - k - j_{sa} + 2)} \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{(\ )} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\ )} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_s} + \boldsymbol{n} - D)}^{(\boldsymbol{l_{ik}} - k - j_{sa}^{ik} + 2)}
$$

$$
\sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{(\ )} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\ )} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik}=$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big) \wedge$

$$fz S_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_{sa}}-k+1)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s +$

$\mathbb{k}, z = 1)\big)$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )} $$

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$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

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$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa} + 1 > \boldsymbol{l_s} \wedge$

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$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$f_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{(\boldsymbol{l_s} + j_{sa} - k)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik}=$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}$ [illegible] $\cdots, j_{sa}^{i}$ [illegible]

$s>4$ [illegible] $\boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big)$ [illegible]

$$fz S_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )} \sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{sa}}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - \cdots \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s +$

$\mathbb{k}, z = 1))$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )} \sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )} $$

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$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa} + 1 > \boldsymbol{l_s} \wedge$

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$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$f_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik}=$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big) \wedge$

$$fz S_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s +$

$\mathbb{k}, z = 1))$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right) \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} (n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}) $$

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$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$$\left((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge\right.$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\left.\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}\right) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa} + 1 > \boldsymbol{l_s} \wedge$

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$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_{ik}, j^{sa}}^{D} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{} \left(\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \right.
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\left. \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \right.
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+j_{sa}-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik}=$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}$ [illegible] $\cdots, j_{sa}^{i}$ [illegible]

$s >$ [illegible] $\boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)$ [illegible]

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}}\ \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j_{sa}^{ik}+1)}\ \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - 1) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}-j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+j^{ik}_{sa}-j_{sa}} \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j^{ik}_{sa}+1)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{(n_i + j_{ik} \quad - s - \quad - I)!}{(n_i - \boldsymbol{n} \quad)! \cdot (\boldsymbol{n} \quad + j^{sa} \quad - j^{ik}_{sa})!} \cdot
$$

$$
\frac{\quad - k - 1)!}{\quad - j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \quad)!}{(D + \quad + s - \quad - \boldsymbol{l_i} - \quad)! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l} = \mathbb{k} = 0 \wedge$

$j_{sa}^{s} \leq j_{sa}^{i} - \mathbb{k} \wedge j_{sa}^{ik} = j_{sa}^{s} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l} = \mathbb{k} > 0 \wedge$

$j_{sa}^{s} \leq j_{sa}^{i} - \mathbb{k} \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik} - \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ \ )}$$

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$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_{s}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+\quad-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - \quad^{ik} - \quad\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} \quad j_{sa}^{s} - j_s - \quad^{ik}_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} \quad k - 1)!}{\quad - k + \quad ! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \quad)!}{(D + j^{sa} + s - \boldsymbol{n} \quad - j_{sa}) \quad (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + \quad \leq j_{ik} \leq \quad + j_{sa}^{ik} - \quad \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} \quad - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} \quad > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} \quad j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \quad < n \wedge \boldsymbol{l_s} > \quad - \boldsymbol{n} + 1 \wedge$

$2 \quad j_s \leq j_{ik} \quad + 1 \wedge \quad + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} \quad _{sa} - j_{sa}^{ik} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} \quad s \wedge$

$\quad - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \quad j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \quad D - \boldsymbol{n} + 1 \wedge$

$2 \quad j_s \leq \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{sa} \quad _{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$$

$$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - \wedge j_{sa}^{s} \leq j_{sa} - 1 \wedge$$

$$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$$

$$s > 3 \wedge \boldsymbol{s} = s) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa} - j_{sa} - j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \{j_{sa}^{s}, \cdots j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots j_{sa}^{i}\} \wedge$$

$$s > 4 \wedge \boldsymbol{s} = \cdots + \mathbb{k} \wedge$$

$$\mathbb{k} = \cdots) \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ \ )}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}^{(\boldsymbol{l_s} + j_{sa} - k)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1}{(\boldsymbol{l_s} - j_s - k)! \cdot (\quad - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l} - j_{sa})! \cdot (\boldsymbol{n} - j_{sa} - j^{sa} -}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} < D + \boldsymbol{l_s} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} < s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j^{ik}_{sa}+1)}^{(\ \ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j^{ik}_{sa}-D-s}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\ \ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(\ \ \ \ j_s+1)}^{(\ \ \ \ )}
$$

$$
\sum_{n_{ik}=}^{(\ \ )} \sum_{(n_{sa}=n_{ik}-j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}
$$

$$
\frac{(n_i - \boldsymbol{n} - I + j^{s}_{sa} - j_s - s - j_{sa})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} - j^{s}_{sa} - j_s - s - j^{ik}_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\ \ \boldsymbol{l_i})!}{(D + j^{sa} + \ \ - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l}_{\boldsymbol{s}} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \ \ \wedge j_s + j^{ik}_{sa} - 1 \leq \ \ \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \ \ \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \ \ + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l}_{\ \ } + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \ \ \wedge \boldsymbol{l_s} \leq D - \ \ + 1 \wedge$

$1 \leq \ \ \wedge j_{ik} - j_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \ \ \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \ \ + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+\cdots-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{} \sum_{j_{ik}=\boldsymbol{l_{ik}}+\cdots+j_{sa}^{ik}-D-\cdots}^{\boldsymbol{l_{ik}}+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < \cdots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$(\boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}}^{\boldsymbol{l_s}+j_{sa}^{ik}-} \sum_{}^{(\ )}
$$

$$
\sum_{}^{-D-s\,(j-} \sum_{}^{+j_{sa}-j_{sa}^{ik})}
$$

$$
\sum_{}^{+1)}
$$

$$
\sum_{n_i=}^{n} \sum_{}^{\mathbb{k}\,(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{=n_{sa}-j_{ik}}^{(\ )} \sum_{}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{(\ + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} + I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < \ \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq \ j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \ \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\ + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} +}^{(\ \ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(\ \ \ \

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{z}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\cdots-j_{sa}^{ik}+2} \left(\boldsymbol{l_{ik}} \cdots - j_{sa}^{ik}+2\right) \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}
$$

$$
\sum_{j_{ik}=\cdots}^{\cdots} \sum_{j_{sa}^{ik}-1}^{(\ )} \left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fz^{\mathfrak{Z}}{}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})} \frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!}.$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$D+j_{sa}-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$D+j_{sa}-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

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$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{D}_{j_s,\ldots,j^{sa}} = \sum_{k=1}^{j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}$ [illegible] $\wedge \boldsymbol{l_i}+$ [illegible] $-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}$ [illegible] $1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq$ [illegible] $j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+$ [illegible] $\leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=$ [illegible] $\wedge \boldsymbol{l_{sa}}+$ [illegible] $-j_{sa}$ [illegible] $\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$D+$ [illegible] $-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq$ [illegible] $+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1) \vee$

$(D \geq \boldsymbol{n} <$ [illegible] $\wedge \boldsymbol{l_s} \leq D-$ [illegible] $+1 \wedge$

$1 \leq j_s \leq j_{ik}-$ [illegible] $\wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-$ [illegible] $\leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

[illegible] $-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$D+j_{sa}-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, \ldots}^{DS} = \sum_{k=1}^{D+\boldsymbol{l_s}+\ldots-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \le D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa}$ [illegible] $\wedge j_{sa}^{s} \le j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4$ [illegible] $\boldsymbol{s} = s + \mathbb{k}$

$\mathbb{k}$ [illegible] $z = 1)\big) =$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )} $$

$$ \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}^{(\boldsymbol{l_s} + j_{sa} - k)} $$

$$ \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} $$

$$ \sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )} $$

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$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - s\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s} \neq j_{sa}^{s}, \cdots, j_{sa}^{ik}, \cdots, j_{sa}^{i}\}$

$s > 2 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s} \neq \{j_{sa}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ \ )}$$

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$$\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{\left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+\quad -j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}^{s}-j_s-\quad -\quad !\right.}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}-j_{sa}^{s}-j_s-\quad \right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-\quad -1)!}{\quad k+\quad !\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\quad)!}{(D+j^{sa}+s-\boldsymbol{n}-\quad -j_{sa})!\left(\boldsymbol{n}+j_{sa}-j^{sa}-s\right)!}$$

$\Big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+\quad -j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+\quad -s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-\quad = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \quad < n \wedge \boldsymbol{l_s} \leq \quad -\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-\quad +1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+\quad -j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$D+\quad -\boldsymbol{n} < \boldsymbol{l_{ik}}+\quad +\boldsymbol{l_s}+j_{sa}^{ik}-\boldsymbol{n}-1)\Big) \wedge$

$\Big((D \geq \boldsymbol{n} < \quad \wedge I=\mathbb{k}=0 \wedge$

$j_s \leq \quad -1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-j_{sa}^{ik}+1)}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+j_{sa}-} \sum_{(j^{sa}=j_{ik}+j_{sa}-} \sum_{n_i=\boldsymbol{n}+\mathbb{k}\,(n_{is}} \sum_{n_{ik}=n_{is}+} \sum_{j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + \quad + j^{s} \quad j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \quad - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \le j \quad \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\quad > \quad < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{(j_s = j_{ik} - \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{D-\boldsymbol{n}+1} \sum_{(\boldsymbol{l_i} + j_{sa} - \cdots)}^{(\quad)}$$

$$\sum_{j_{ik} - \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}} (j^{sa} \cdots \boldsymbol{n} + j_{sa} - D - s)}^{\quad} \sum_{(\cdots j_s + 1)}^{\quad}$$

$$\sum_{\cdots + \mathbb{k} (n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{\quad} \sum_{\quad}^{(\quad)}$$

$$\sum_{n_{ik} = n_{is} + \cdots + j_{ik} (n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{\quad} \sum_{\quad}^{\quad}$$

$$\frac{\cdots + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\geq \boldsymbol{n} < \cdots \wedge \boldsymbol{l_s} > D - \cdots + 1 \wedge$

$2 \leq j_{\cdots} \leq j_{ik} - \cdots \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \cdots^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\cdots - j_{sa}^{ik} \cdots = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} \ldots \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\quad)}
$$

$$
(\boldsymbol{l_{sa}} \ldots)
$$

$$
\sum_{= j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_s} \ldots j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)} \sum_{}
$$

$$
(\quad j_s + 1)
$$

$$
\sum_{} \sum_{n_{i} \ldots + \mathbb{k}\,(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + \ldots + j_{ik}\,(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})} \sum_{}^{(\quad)}
$$

$$
\frac{\ldots + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} \ldots - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\ldots \geq \boldsymbol{n} < \ldots \wedge \boldsymbol{l_s} > D - \ldots + 1 \wedge$

$2 \leq j_{\ldots} \leq j_{ik} - \ldots \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} \ldots {}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{\ldots}} - j_{sa}^{ik} \ldots = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{(j_s = j_{ik} - \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{D-\boldsymbol{n}+1} \sum_{(\boldsymbol{l_{ik}} + j_{sa} - k - j_s)}^{(\quad)}$$

$$\sum_{j_{ik} = j_{sa} - \boldsymbol{l_{sa}} (j^{sa} = \boldsymbol{l_{ik}} + j_{sa} - D - j_{sa}^{ik})}^{\quad} \sum_{(\quad + 1)}^{(\quad)}$$

$$\sum_{n_i - \mathbb{k} (n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{n} \sum^{(\quad)}$$

$$\sum_{= n_i - j_{ik} (n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{(\quad + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < \quad \boldsymbol{l_s} > D - \quad + 1 \wedge$

$2 \leq \quad j_{ik} - j_{sa} \quad 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} \quad \boldsymbol{l_{ik}})}
$$

$$
\sum_{(\boldsymbol{l_s} + j_{sa} - k)}
$$

$$
\sum_{j_{ik} = j^{sa} \quad -\boldsymbol{l_{sa}} (} \quad -D-1)
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\quad)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\left(n + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \quad - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \quad \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{sa} \quad {}_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \left(\right.
$$

$$
\sum_{j_{ik}=j^{s}}^{(\boldsymbol{l_{sa}}-k+1)} \left(\right.
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \quad - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \quad < n \wedge \boldsymbol{l_s} \quad \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{sa} \quad _{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \Bigg(\sum_{(j_s = j_{ik} \quad \boldsymbol{l_{ik}})} \Bigg(\sum_{(\quad j_{sa}-k-j_{sa}^{ik}+1)} \Bigg(\sum_{j_{ik}=j^{sa} \quad -\boldsymbol{l_{sa}} \; (j^{s} \quad -D-s)} \Bigg(\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \Bigg(\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)} \Bigg(\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \Bigg(\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})} \right.\right.\right.\right.\right.\right.\right.
$$

$$
\left.\left.\left.\left.\left.\left.\left. \frac{\left(\quad + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \quad - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot \right.\right.\right.\right.\right.\right.\right.
$$

$$
\left.\left.\left.\left.\left.\left. \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \right.\right.\right.\right.\right.\right.
$$

$$
\left.\left.\left.\left.\left. \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!} \right.\right.\right.\right.\right.
$$

$D \geq \quad < n \wedge \boldsymbol{l_s} \quad \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} ^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}
$$

$$
(\boldsymbol{l_s}- \quad -k)
$$

$$
\sum_{j_{i} \quad ^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_s} \quad ^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < \quad \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\quad \leq j_s \leq \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}
$$

$$
(\boldsymbol{l_i} + \quad - k - s + 1)
$$

$$
\sum_{j_{ik} = j^{sa} + \quad \boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < \quad \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\quad \leq j_s \leq \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}
$$

$$
+ j_{sa} \quad - j_{sa}^{ik} + 1)
$$

$$
\sum_{j^{sa} + \boldsymbol{l_{ik}} -} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ \ )}
$$

$$
\frac{(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot
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\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
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\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$< j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz^{S}_{j_s} \quad \sum_{\quad} \quad \sum_{\quad + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\quad)}$$

$$\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D)}^{}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fz^{S}_{j_s} \sum^{D-\quad+1} \sum^{(\ \ )}_{\quad+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}$$

$$\sum^{(\boldsymbol{l_i}+j_{sa}-k-s+1)}$$

$$\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}\ \ a} \sum_{(j^{sa}=\boldsymbol{l_{ik}}+\boldsymbol{n}+j_{sa}-D-j_{sa}^{ik})}$$

$$\sum^{n}_{n_i=\boldsymbol{n}+\mathbb{k}} \sum^{(n_i-j_s+1)}_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ \ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$\boldsymbol{> n} \ldots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{= j^{sa} + \boldsymbol{l_{ik}} -} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$$fzS_{j_s}^{} = \sum_{k=}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}^{(\boldsymbol{l_s} + j_{sa} - k)}$$

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$$
\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}^{(\boldsymbol{l_i} + j_{sa} - k - s + 1)} \sum_{(j^{sa} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
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\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot
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$$

$$
\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}^{(\boldsymbol{l_{sa}} - k + 1)} \sum_{(j^{sa} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
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\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot
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$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}
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\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\ )} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$S_{\dots}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_i} + j_{sa}^{ik} - k - s + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j_{sa}^{ik} - D - j_{sa}}^{\boldsymbol{l_{sa}} + j_{sa}^{ik} - k - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_{ik}}-k+1}\sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}\big)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa}^{ik} - D - 1}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{sa}}+j_{sa}^{ik}-k-j_{sa}+1}\sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

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$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} -$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq$ $_{a}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} =$ $+ \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_s-s=\boldsymbol{l_s}\wedge$

$\left((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge\right.$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\right\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\right\}\wedge$

$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$

$\left.\mathbb{k}_z:z=1\right)\Big)$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_s}+j_{sa}^{ik}-k}\sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k)!\cdot(\ -2)!}\cdot$$

$$\frac{(D-\ )!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}\ \boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l}}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa}$ $_{a}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j$ $= \boldsymbol{l_{ik}} \wedge \boldsymbol{l}$ $j_{sa} - s =$ $\wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge$ $_{s} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \right.$ $\left. j_{sa}^{i}\right\} \wedge$

s $3 \wedge \boldsymbol{s} =$ $\wedge$

$(D$ $\boldsymbol{n} < n \wedge I =$ $> 0 \wedge$

$j_{sa} \leq j_{sa}$ $1 \wedge j_{sa}^{ik} = j_{s}$ $1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{i}\right.$ $\left. j_{sa}\right\} \wedge$

s $4 \wedge$ $s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1) \Rightarrow$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1}\ \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_i}+j_{sa}^{ik}-k-s+1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+\cdots-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}^{s}-j_s-\cdots-j_{sa}^{ik}-\cdots\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-\cdots-j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-\cdots-k-1)!}{\cdots-k+\cdots!\cdot(j_s-2)!}\cdot$$

$$\frac{(\cdots-\boldsymbol{l_i})!}{(D+j^{sa}-\cdots-\boldsymbol{l_{sa}})!\cdots+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+\cdots \leq j_{ik} \leq \cdots+j_{sa}^{ik}-\cdots \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}\cdots_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-\cdots=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}-j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I=\cdots=0 \wedge\right.$

$j_{sa}^{s} \leq j_{sa}^{i}-1 \wedge \cdots j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq \cdots j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{\cdots, j_{sa}^{ik}, j_{sa}, \cdots\} \wedge$

$\cdots > 3 \wedge \cdots s) \vee$

$(D \geq \cdots < n \wedge \cdots 0 \wedge$

$j_{sa} \leq j_{sa}^{i} \cdots \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\cdots\{j_{sa}^{s}, \cdots j_{sa}^{i}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j^{ik}_{sa}-D-j_{sa}}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{\cdot}})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\ \mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}\ a}^{(\ )} \sum_{a=n_{ik}+j_{ik}-j^{s}\ )}^{(\ )}
$$

$$
\frac{(n_i + j_{ik} \quad j_s - s - \quad ik} - I)!}{(n_i \quad \boldsymbol{n} - I)! \cdot (\boldsymbol{n} \quad j_{ik} + j_{sa} \quad s - j^{ik}_{sa})!} \cdot
$$

$$
\frac{\boldsymbol{l_{\cdot}} - k - 1)!}{\quad - j_s \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad - \boldsymbol{l_i})!}{(D + \quad - \boldsymbol{n} - \boldsymbol{l} \quad)! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j \quad < \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + \quad ik - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \quad \boldsymbol{n} < n \wedge I = \quad = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} \quad 1 \wedge j^{ik}_{sa} = j_{s} \quad 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{s} \quad \cdots, j^{ik}_{sa}, j_{sa} \quad sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} \quad) \vee$

$(D > \boldsymbol{n} \quad t \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j^{ik}_{sa} - D - j_{sa}}^{\boldsymbol{l_s} + j^{ik}_{sa} - k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}}}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(j_s + 1)}$$

$$\sum_{n_{ik} = \quad}$$

$$\sum_{(n_{sa} = \quad j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{\left(n_i \quad + j^s_{sa} \quad j_s - s - j_{sa}\right)!}{(n_i - \boldsymbol{n} - I)! \quad \boldsymbol{n} + j_{ik} \quad j^s_{sa} - j_s - s - j^{ik}_{sa})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{D - \boldsymbol{l_i})!}{(D \quad j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad ^{sa} \leq \boldsymbol{n} \quad _{sa} - s$

$\boldsymbol{l_{ik}} \quad ^{ik} + 1 = \boldsymbol{l_s} \wedge \quad + j^{ik}_{sa} \quad _{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq \quad - 1 \wedge j_{sa} \quad j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j \quad j_{sa}, \cdots, j^i_{sa}\} \wedge$

$\quad 2 \wedge \quad = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik} = \boldsymbol{l_{ik}} + \boldsymbol{n} - D}^{\boldsymbol{l_i} + j^{ik}_{sa} - k - s + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}$$

$$\sum_{n_{is} = \boldsymbol{n} + \mathbb{k}}^{(n_i - \quad + 1)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_{ik})}$$

$$\sum_{n_{ik} = n_{is} + \quad j_{ik}} \sum_{(n_{sa} = n_{ik} \quad - \mathbb{k})}$$

$$\frac{\left(n_i + j_{ik} \quad ^{s}_{sa} - j_s \quad - j^{ik}_{sa} - I\right)!}{(\boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} \quad _{ik} + j^{s}_{sa} - j_s - s - j^{ik}_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\quad - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + \quad ^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \quad < n \wedge \boldsymbol{l_s} > \quad \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - \quad ^{ik} + 1 \wedge j \quad + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} \quad _{sa} - j^{ik}_{sa} \leq j^{s} \quad \boldsymbol{n} + j_{sa} \quad s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} \quad 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \quad j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D > \boldsymbol{n} < n \wedge \quad = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - \quad \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\{j^{s} \quad _{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_i}}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_{ik}} + \boldsymbol{n} - D}^{\boldsymbol{l_{sa}} + j_{sa}^{ik} - k - j_{sa} + 1} \sum^{(\ )} \quad (n_i - j_s$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{} \sum_{= \boldsymbol{n} + \mathbb{k} - j_s + 1)}$$

$$\sum_{n_{ik}}^{} \sum_{= n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{(n_i + j_{ik} + j_{sa}^{s} \quad j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} \quad I)! \cdot (\boldsymbol{n} + \quad + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(\quad + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad \wedge j_s + j_{sa} \quad 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} \quad {}^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad + 1 = \quad \boldsymbol{sa} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$\quad < j^{i} \quad 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s - \boldsymbol{l_s} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{ik}}+}^{\boldsymbol{l_s}+j_{sa}^{ik}-} \sum_{D\ (j^{sa}=j_{ik}+\boldsymbol{l_{sa}}}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}\ (}^{n} \sum_{j_s+1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik}=n_{is}+}^{(\ )} \sum_{j_{ik}\ (n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i - \quad + j_s^s \quad j_s - s - j_{sa}^{ik} - I\right)!}{(n_i \quad - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge$

$\le j_s \le \quad - j_{sa}^{ik} + 1 \wedge \quad + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \quad \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D > \quad n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{(j_s = j_{ik} \ldots - \boldsymbol{l_{ik}})}^{D-\boldsymbol{n}+1} \sum_{j_{ik} \ldots - D - 1 \ldots}^{\boldsymbol{l_i} + j_{sa}^{ik} - k \ldots 1} \sum_{\ldots = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\quad)} \sum_{n_i \ldots \mathbb{k} (n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{n \ldots (\ldots + 1)} \sum_{\ldots = n_{i} \ldots - j_{ik} (n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{(\ldots + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} \ldots + I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < \ldots \wedge \boldsymbol{l_s} > D - \ldots + 1 \wedge$

$2 \leq \ldots < j_{ik} - j_{sa} \ldots \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \ldots^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\ldots - j^{ik} \ldots 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \left(\right.
$$

$$
\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{l_{ik}}}^{\boldsymbol{l_{sa}}+j_{sa}^{ik}-D-1} \left(\right. \sum_{\left. -\boldsymbol{l_{ik}}\right)}^{\left(\right.}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{\left(\right.} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(\boldsymbol{l_s} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{\left(\boldsymbol{n_i} - \boldsymbol{l_s} - I\right)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\boldsymbol{n} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} ^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}} ^{k+1} \sum_{+\boldsymbol{n}+j_{sa}^{ik}-1} (j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} ^{(\ )} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$< j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz S_{j_s, j_{ik}}^{D\boldsymbol{s}} \sum_{k=1}^{D-\boldsymbol{n}+} \sum_{D-s+1)}^{(\boldsymbol{l_i}-k-s+2)}$$

$$\sum_{j_{ik}} \sum^{(\ )}_{+\boldsymbol{l_{ik}}-\boldsymbol{l_s}\ j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\boldsymbol{n} < \ \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, J}^{DSD} \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(\boldsymbol{l_{sa}}-k-j_{sa}+2)} \sum_{(\boldsymbol{l_{sa}}-j_{sa}+1)} \sum_{j_{ik}(\boldsymbol{l_{ik}}+\boldsymbol{l_{ik}}-\boldsymbol{l_s} \cup j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \frac{(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\boldsymbol{n} < \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s}^{(j_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{ik}}^{(j_{sa}^{ik}+1)} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\quad)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{z}S^{DSD}_{j_s, j_{ik}} = \sum_{k=1}^{\quad} \sum_{(j_s = \boldsymbol{l_s} + \boldsymbol{n} - D)}^{(\quad)}
$$

$$
\sum_{j_{ik} = \quad \boldsymbol{l_{ik}} - \boldsymbol{l_s}}^{\quad} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\quad)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$f_{Z}^{DSD}$$

$$\sum_{j_{ik}=\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\boldsymbol{l_{sa}}-j_{sa}+2)} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\quad)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz_{j_{ik}, j^{sa}}^{DSD} \sum_{(j_s = \boldsymbol{l_i} + \boldsymbol{n} - D - s + 1)}^{D-} \sum^{(\boldsymbol{l_{ik}} - j_{sa}^{ik} + 2)}$$

$$\sum_{j_{ik} = \boldsymbol{+ l_{ik} - l_s}} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa} - l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}}^{DS} = \sum_{k=1}^{\boldsymbol{n}+1} \sum_{j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 3 \wedge \boldsymbol{s} = s) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)\big) \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_i}-k-s+2)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

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$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 3 \wedge \boldsymbol{s} = s) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z : z = 1)\big) \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-j_{sa}^{ik}} \sum_{(j_s = \boldsymbol{l_{sa}} + \boldsymbol{n} - D - j_{sa} + 1)}^{(\boldsymbol{l_{ik}} - k - j_{sa}^{ik} + 2)} \sum_{j_{ik} = j_s + \boldsymbol{l_{ik}} - \boldsymbol{l_s}} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_{sa}} + \boldsymbol{n} - D - j_{sa} + 1)}^{(\boldsymbol{l_s} - k + 1)}$$

$$\sum_{j_{ik} = j_s + \boldsymbol{l_{ik}} - \boldsymbol{l_s}} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s}^{D} {}_{isa} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$$\mathcal{S}_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_{ik}} + \boldsymbol{n} - D - j_{sa}^{ik} + 1)}^{(\boldsymbol{l_s} - k + 1)}$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

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$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{(\boldsymbol{l_{sa}} - k + 1)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$\big((D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}})\vee$

$(D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}\wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i}\leq D+\boldsymbol{l_s}+s-(\boldsymbol{n}+1)\big)\wedge$

$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j^{ik}_{sa}+1)}
$$

$$
\sum_{n_i=\boldsymbol{n}+} \sum_{(\ \ \ \

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}} \sum_{+j_{sa}^{ik}-j_{sa}} \sum_{=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\quad ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

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$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$\left(\right)_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$\mathcal{S}^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(n_i-j_s+1)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(\ )} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\big(n_i+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}\big)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$\mathcal{S}_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}}\ \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_s}+j_{sa}-k)}\ \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}\right)!}\cdot$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}})\vee$

$(D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i}\leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)\vee$

$\big((D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}$ $\wedge j_{sa}^{s}\leq j_{sa}^{ik}$ $\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3$ $\boldsymbol{s}=s)\vee$

$(D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

j_{sa} $j_{sa}^{i}-1\wedge j_{sa}^{ik}$ $j_{sa}-1\wedge$ $\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,$ $\}\wedge$

$s>4\wedge \boldsymbol{s}=s$ $\wedge$

$\mathbb{k}_z:z=1\big)\Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}}\ \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ \ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}\ \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_s}+j_{sa}-k)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_s}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}$

$\left((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s \geq 3 \wedge \boldsymbol{s} =$

$(D \geq \boldsymbol{n} < n \wedge I =$

$j_{sa} \leq j_{sa}$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}\right.$

$s \geq 4 \wedge$

$\mathbb{k}_z: z = 1$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}}\ \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

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$$\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+\quad-j^{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}^{s}-j_s-\quad-j_{sa}^{ik}-\quad\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-\quad-j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{-k+\quad)!\cdot(j_s-2)!}$$

$$\frac{-\boldsymbol{l_i})!}{(D+j^{sa}-\quad-\boldsymbol{l_{sa}})!\,(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j^{ik}\quad \leq j_{ik} \leq \quad+j_{sa}^{ik}-j\quad \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}\quad j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}\quad = \boldsymbol{l_{ik}} \wedge \boldsymbol{l}\quad j_{sa}-s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \quad < n \wedge \boldsymbol{l_s} \leq \quad-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-\quad+1 \wedge \quad+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}\quad j_{sa}-j_{sa}^{ik} \leq j\quad \boldsymbol{n}+j_{sa}\quad \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}\quad j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge$

$D+s-\boldsymbol{n} < \quad D-\boldsymbol{l_s}+s-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n}\quad \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}\quad 1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} +}
$$

$$
\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{(\boldsymbol{l_s}+}^{(\boldsymbol{n}+j_s}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}} \sum_{=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s}
$$

$$
\sum_{n_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{(n_i + j_{ik} + j_{sa}^{s} \quad j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} \quad I)! \cdot (\boldsymbol{n} + \quad + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + \quad s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$((D \geq \boldsymbol{n} < n \wedge \quad > D - \quad + 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad j_s + j_{sa}^{s} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad ^{ik} + 1 = \boldsymbol{l_s} \quad \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \quad \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$\quad j_{ik} \quad ^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz S_{j_s \cdots j^{sa}} = \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{D + \boldsymbol{l_s} \cdots \boldsymbol{l_i}} \binom{}{}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} \cdots \xi - D - s}^{\boldsymbol{l_{sa}} + j_{s} \cdots k - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{\binom{}{}}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{\binom{}{}}$$

$$\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}})\vee$

$(D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i}\leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1\big)\wedge$

$\big((D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}\wedge j_{sa}^{s}\leq j_{sa}^{ik}\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge \boldsymbol{s}=s)\vee$

$(D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge \boldsymbol{s}=s\wedge\mathbb{k}\wedge$

$\mathbb{k}_z:z=1\big)\Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}}\ \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ \ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{ik}}-k+1}\ \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ \ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)} \cdot \frac{(\boldsymbol{l_s} - k - 1}{(\boldsymbol{l_s} - j_s - k)! \cdot (\quad - 2)!} \cdot \frac{(D - \quad)!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} \quad \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i}}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} \quad j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} \quad j_{sa} - s > \quad) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} \quad 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j \quad - 1 \leq j_{ik} \leq \quad sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j \quad a - j_{sa}^{ik} \leq j \quad \leq \boldsymbol{n} + j_{sa} - s$

$\boldsymbol{l} \quad - j_{sa}^{ik} + 1 \quad \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \quad j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq \quad + \boldsymbol{l_s} + s \quad - 1)\big) \wedge$

$\big((D \geq \boldsymbol{l} \quad < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \quad j_{sa}^{ik} \quad j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} \quad s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j^{ik}_{sa}-D-s}^{\boldsymbol{l_{ik}}-k+1} \sum_{\left(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa}\right.}^{(\ \ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+}^{n} \sum_{(\ \ j_s+1)}^{\ \ }
$$

$$
\sum_{n_{ik}=} \sum_{(n_{sa}=} ^{(\ \ )}
$$

$$
\frac{\left(n_i - j_{ik} + j^{s}_{sa} - j_s - s - j_{sa}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} - j^{s}_{sa} - j_s - s - j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \geq D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \cdots \wedge j_s + j^{ik}_{sa} - 1 \cdots \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \cdots j^{sa} \leq \boldsymbol{n} \cdots j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} \cdots j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \cdots + j^{ik}_{sa} \cdots j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$(D \geq \boldsymbol{n} \cdots n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq \cdots - 1 \wedge j_{sa} \cdots j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, \cdots j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$\cdots 3 \wedge \cdots = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j^{ik}_{sa}-D-s}^{\boldsymbol{l_s}+j^{ik}_{sa}-k} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}$$

$$\sum_{n_i=\mathbb{k}}^{(n_i-1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s)}$$

$$\sum_{n_{ik}=n_{is}+j_{ik}}^{(\quad)} (n_{sa}=n_{ik}-j^{sa}-\mathbb{k})$$

$$\frac{\left(n_i + j_{ik} - j^s_{sa} - j_s - j^{ik}_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} - j_{ik} + j^s_{sa} - j_s - s - j^{ik}_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\quad - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(\quad + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \quad < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - \quad + 1 \wedge j_s - j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{sa} + \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} - j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D - \quad < n \wedge \quad = 0 \wedge$

$j_{sa} \leq j^i_{sa} - \quad \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\{; s \quad ^{ik}_{sa}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_i}}^{(\ \ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum^{(\ \ )}
$$

$$
\sum_{\ =\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+} \sum_{\ =\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}}^{\ +j_s-j_{ik}} \sum_{\ =n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\ + j_{ik} + j_{sa}^{s}\ j_s - s - j_{sa}^{ik} - I)!}{\ - \boldsymbol{n}\ I)! \cdot (\boldsymbol{n} + \ + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{\ + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \ > D - \ + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + \ j_s + j_{sa}^{s} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \ ^{ik} \leq j^{sa} \leq \ + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \ + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \ \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$\ _{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz S_{j_s \cdots j^{sa}} = \sum_{1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{\boldsymbol{l_s} \cdots - k} \sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + \cdots - D - s \; (j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{s}}^{DSD} = \sum_{k=1}^{D+\cdots s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_s} + j_{s}^{i} \cdots k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

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$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{s} \leq j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} > s + \mathbb{k} \wedge$

$\mathbb{k}_z . z = 1)\big) \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)}$$

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$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\ )} \left(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}}\right)$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \left(n_{sa}=n_{ik}+\boldsymbol{\ }-j^{sa}-\mathbb{k}\right)$$

$$\frac{\left(n_i+j_{ik}+j_{sa}^{s}-j_s-\boldsymbol{\ }-j_{sa}^{ik}-\boldsymbol{\ }\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-\boldsymbol{\ }-j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{-k+\boldsymbol{\ }!\cdot(j_s-2)!}$$

$$\frac{(D-\boldsymbol{\ }-1)!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{\ }-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j^{ik}_{\boldsymbol{\ }} \leq j_{ik} \leq j_{\boldsymbol{\ }}+j_{sa}^{ik}-j_{\boldsymbol{\ }} \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+\boldsymbol{\ }-j_{sa}=\boldsymbol{l_{ik}}+\boldsymbol{\ }+j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1$

$1 \leq j_{\boldsymbol{\ }} \leq j_{ik}-j_{sa}^{ik}+\boldsymbol{\ } \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{s} \leq j^{sa} \leq \boldsymbol{\ }+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{\ }+j_{sa}^{ik}-\boldsymbol{\ }=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}} \wedge$

$D+s-\boldsymbol{\ } \leq \boldsymbol{l_i} \leq D+\boldsymbol{\ }+s-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{\ } \geq 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{\ }: \{j_{sa}^{s}, \cdots, j_{sa}^{\boldsymbol{\ }}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(} \sum_{(j^{sa}=j_{}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{)}
$$

$$
\sum_{}^{(n_i-} \sum_{}^{+1)}
$$

$$
\sum_{n_{}+\mathbb{k}\,(n_{is}=\boldsymbol{n}+\mathbb{k}-j_{}}^{} \sum_{}^{)}
$$

$$
\sum_{}^{(} \sum_{}^{)}
$$

$$
\sum_{n_{ik}=n_{is}+j_{ik}\,(n_{sa}=n_{ik}} \sum_{}^{j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + j_{ik} \quad ;s \right.}{(n_{} \quad \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} \quad _{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\quad - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(\quad + j^{sa} + s \quad \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > \quad - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{} + 1 \wedge j_s \quad j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \quad j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \quad < n \wedge \boldsymbol{l_s} \quad - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{} \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{} \quad j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-} \sum_{(D-s+1)}^{\left(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2\right)}$$

$$\sum_{j_{ik}=\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\ )} \sum_{\left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{\left(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}\right)}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\boldsymbol{l_{ik}} \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fz\boldsymbol{S}_{j_{ik},j^{sa}}^{D} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$f^{SD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}\big)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$f_{n_s,j_{ik},j^{sa}}^{SD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\ )} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})} \frac{\big(n_i+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}\big)!}\cdot$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D+s-\boldsymbol{n} < \boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa} \wedge j_{sa}^{s} \leq j_{sa}^{ik} \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} \leq j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s}=s-\mathbb{k} \wedge$

$\mathbb{k}_z: z=1) \Rightarrow$

$$fz S_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k)!\cdot(-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}$ $-j_{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1>\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j$ $=\boldsymbol{l_{ik}}\wedge\boldsymbol{l}$ $j_{sa}-s=$ $\wedge$

$\left((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}=0\right.$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge$ $\leq j_{sa}^{ik}-1$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},$ $j_{sa}^{i}\}\wedge$

s $3\wedge\boldsymbol{s}=$ $\wedge$

$(D$ $\boldsymbol{n}<n\wedge I=$ $>0\wedge$

$j_{sa}\leq j_{sa}$ $1\wedge j_{sa}^{ik}=j_{s}$ $-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{i}$ $j_{sa}\}\wedge$

s $4\wedge$ $s+\mathbb{k}\wedge$

$\mathbb{k}_z:z=1)$ $\Rightarrow$

$$fz S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}}\ \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \left(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}}\right)$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_{sa}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+}^{} {}^{-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}^{s}-j_s-\right.^{ik}_{sa}-1)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-\right.^{ik}_{sa})!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{l_{sa}})!\,(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+$ $\leq j_{ik} \leq$ $+j_{sa}^{ik}-$ $\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}$ $-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-$ $= \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}$ $j_{sa}-s > \boldsymbol{l_{sa}}) \vee$

$(D \geq$ $< n \wedge \boldsymbol{l_s} \leq$ $-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-$ $+1 \wedge$ $+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

j_{ik} $-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}$ $s \wedge$

$-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D+s-\boldsymbol{n} <$ $\boldsymbol{l_s}+s-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n}$ $\wedge I = \mathbb{k} = 0 \wedge$

$< j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}} \sum_{=j_{ik}+}^{)} \quad -\boldsymbol{l_{ik}})
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}} \sum_{=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-)_s}
$$

$$
\sum_{n_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{n_i + j_{ik} + j_{sa}^{s} \quad j_s - s - j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} \quad I)! \cdot (\boldsymbol{n} + \quad + j_{sa}^{s} - j_s - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + \quad s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \quad > D - \quad + 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad ^{ik} + 1 = \boldsymbol{l_s} \quad \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$\quad \leq j \quad ^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DS}_{j_s, j_{ik}, \ldots, z} = \sum_{k=1}^{(\boldsymbol{l_s}+j_{sa}-\boldsymbol{l_{ik}})} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\boldsymbol{l_i}-j_{sa}-k-j_{sa}^{ik}+1)} \sum_{j_{ik}=j^{sa}+j_{sa}}^{} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{n} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(\ )} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$O_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \frac{\big(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!}.$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$D+j_{sa}-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa} \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge \mathbb{k}=\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s}=s \wedge \mathbb{k} \wedge$

$\mathbb{k}_z : z=1\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}}\ \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ \ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}\ \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_s}+j_{sa}-k)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k)!\cdot(\quad-2)!}\cdot$$

$$\frac{(D-\quad)!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}-\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i}}$$

$\big((D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1>\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}})\vee$

$(D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1>\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$D+j_{sa}-\boldsymbol{n}<\boldsymbol{l_{sa}}<D+\boldsymbol{l_s}-\boldsymbol{n}-1)\big)\wedge$

$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik} = j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s}^{(\boldsymbol{l_s}+j_{sa}-k)}
$$

$$
\sum_{n_i = \boldsymbol{n}+} \sum_{(\quad \boldsymbol{n}+ \quad j_s+1)}^{n}
$$

$$
\sum_{n_{ik} = \quad} \sum_{(n_{sa} = \quad j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i \quad j_{ik} + j^s_{sa} \quad j_s - s - j_{sa})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} \quad j^s_{sa} - j_s - s - j^{ik}_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{\quad - \boldsymbol{l_i})!}{(D \quad j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \leq \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad {}^{sa} \leq \boldsymbol{n} \quad _{sa} - s$

$\boldsymbol{l_{ik}} \quad {}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} \leq D - \quad + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa} \quad \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad {}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad - j^{ik} \quad 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+\cdots-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})} \sum_{(\cdots j_{sa}-k)} \sum_{j_{ik}=j^{sa}+\cdots-j_{sa}} \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < \cdots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$< j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

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$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fz\sum_{j_{ik}, j^{sa}}^{D} = \sum_{k=1}^{\boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}^{(\boldsymbol{l_s} + j_{sa} - k)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+j_{sa}-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik}=$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, \cdots, j_{sa}^{i}\} \wedge$

$s >$ [illegible] $\boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big)$ [illegible]

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}}\ \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{ik}}-k+1}\ \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s -$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} -$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - 1) \wedge$

$\big(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s +$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j^{ik}_{sa}-D-j_{sa}}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=n_i-\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(\ =n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{(n_i + j_{ik} \quad i - s \quad ik - I)!}{(n_i \quad \boldsymbol{n} \quad I)! \cdot (\boldsymbol{n} \quad j_{ik} + j_{sa} \quad - j^{ik}_{sa})!} \cdot
$$

$$
\frac{\boldsymbol{l_{ik}} - k - 1)!}{ - j_s \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad - \boldsymbol{l_i})!}{(D + \quad - \boldsymbol{n} - \boldsymbol{l} \quad)! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{l} \quad 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad ^{a} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{s} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + \quad ^{ik} - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq \quad \boldsymbol{n} + 1$

$1 \leq j_s \leq \quad - j^{ik}_{sa} + 1 \wedge \quad _s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \quad \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\quad + j_{sa} \quad < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{} \sum_{(j_s = j_{ik} \; \boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} \; \mathbb{k} - D - s \; (} \sum_{} \; (\; - j_{sa}^{ik})
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\;)}
$$

$$
\frac{\big(\; + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{(\; - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \; < n \wedge \boldsymbol{l_s} \; D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i} \; j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\; j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, \ldots}^{DSI} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s - \mathbb{k} \wedge$

$\mathbb{k}_z : = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - 1) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}-j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j^{ik}_{sa}-D-j_{sa}}^{\boldsymbol{l_s}+j^{ik}_{sa}-k} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{(n_i + j_{ik} \quad - s - \quad - I)!}{(n_i - \boldsymbol{n} \quad I)! \cdot (\boldsymbol{n} \quad + j_{sa} \quad - j^{ik}_{sa})!} \cdot
$$

$$
\frac{\quad - k - 1)!}{- j_s - \quad 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad - \boldsymbol{l_i})!}{(D + \quad - \boldsymbol{n} - \boldsymbol{l} \quad)! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + j \quad - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \quad < n \wedge \boldsymbol{l_s} \leq D \quad \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j \quad - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j \quad \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\quad \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\quad)} \sum_{(\quad - j_{sa}^{ik})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(+ j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{-I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fz^{\sum_{j_s=}^{D} j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{s} \cdots, j_{sa}^{i}\} \wedge$

$s \geq 4 \wedge \boldsymbol{s} = \mathbb{k} \wedge$

$\mathbb{k}_z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\ )} \left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right) \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \left(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1\right)^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s -$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} -$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - 1) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s +$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+j^{ik}_{sa}-1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_i})}^{(\ \ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\ \ \mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{ik}=n_{ik}+j_{ik}-j^{sa})}^{(\ \ )}
$$

$$
\frac{(n_i+j_{ik}\ \ \ \ j_s-s-\ \ ^{ik}-I)!}{(n_i-\boldsymbol{n}-I)!\cdot(\boldsymbol{n}\ \ \ j_{ik}+j_{sa}\ \ \ \ \ \ s-j^{ik}_{sa})!}\cdot
$$

$$
\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-\ \ +1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(\ \ -\boldsymbol{l_i})!}{(D+\ \ -\boldsymbol{n}-\boldsymbol{l}\ \ )!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D -\ \ +1 \wedge$

$2 \leq j_s \leq j_{ik}-j^{ik}_{sa}+1 \wedge j_s+j^{ik}_{sa}-1 \leq j_{ik} \leq\ \ ^{sa}+j^{ik}_{sa}-j_{sa} \wedge$

$j_{ik}+\ \ -j^{ik}_{sa} \leq j^{s}\ \ \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j^{ik}_{sa}+1 =\ \ \wedge \boldsymbol{l_{sa}}+\ \ ^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \leq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq\ \ -\boldsymbol{n}+1$

$\ \ \leq j_s \leq\ \ -j^{ik}_{sa}+1 \wedge\ \ _s+j^{ik}_{sa}-1 \leq j_{ik} \leq j^{sa}+j^{ik}_{sa}-j_{sa} \wedge$

$j_{ik}+\ \ -j^{ik}_{sa} \leq\ \ \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j^{ik}_{sa}+\ \ =\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j^{ik}_{sa}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\ \ +j_{sa}\ \ < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j^{i}_{sa}-1 \wedge j^{ik}_{sa}=j_{sa}-1 \wedge j^{s}_{sa} \leq j^{ik}_{sa}-1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa},\cdots,j^{ik}_{sa},j_{sa},\cdots,j^{i}_{sa}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=\boldsymbol{n}+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\quad)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}-I\right)!}{(n_i - I)! \cdot \left(\boldsymbol{n}+j_{ik}+j_{sa}^{s}-j_s-s-j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)! \cdot (j_s-2)!} \cdot
$$

$$
\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})! \cdot (\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

$\big((D > \boldsymbol{n} < n \wedge j_s - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fz^{\sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_s}-k+1)}} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge$ $\leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{s}^{s}$ $\cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}$ $, j_{sa}^{i}\} \wedge$

s $4 \wedge \boldsymbol{s} = s$ $\mathbb{k} \wedge$

$\mathbb{k}_z$ $= 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )} $$

$$ \sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}^{(\boldsymbol{l_s} + j_{sa} - k)} $$

$$ \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} $$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s -$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} -$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - 1) \wedge$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s$

$(D \geq \boldsymbol{n} < \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}-j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_s}+j^{ik}_{sa}-k} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\ \mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{(n_i + j_{ik} \quad - s - \quad - I)!}{(n_i - \boldsymbol{n} \quad I)! \cdot (\boldsymbol{n} \quad j_{ik} + j_{sa} \quad - j^{ik}_{sa})!} \cdot
$$

$$
\frac{\quad - k - 1)!}{- j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad - \boldsymbol{l_i})!}{(D + \quad - \boldsymbol{n} - \boldsymbol{l} \quad)! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \quad \wedge \boldsymbol{l_{sa}} + \quad - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \quad < n \wedge \boldsymbol{l_s} \leq \quad \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq \quad - j^{ik}_{sa} + 1 \wedge \quad + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq \quad \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \quad > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\quad \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j^{ik}_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=\boldsymbol{n}+j_{sa}^{ik}-1}^{(\quad)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)}
$$

$$
\frac{\big(\quad + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik} - I\big)!}{\quad - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa}^{s} - j_s - s - j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$\quad \leq j \quad ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$\boldsymbol{l_{sa}} > D + \boldsymbol{l_{ik}} + j_{sa} - \boldsymbol{n} - j_{sa}^{ik} \wedge \boldsymbol{l_i} > D + \boldsymbol{l_{sa}} + s - \boldsymbol{n} - j_{sa}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$\boldsymbol{l_{ik}} > D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1 \wedge \boldsymbol{l_i} > D + \boldsymbol{l_{sa}} + s - \boldsymbol{n} - j_{sa}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa} + 1 > \boldsymbol{l_s} \wedge$

$\boldsymbol{l_{sa}} > D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1 \wedge \boldsymbol{l_i} > D + \boldsymbol{l}$ [illegible] $+ s - \boldsymbol{n}$ [illegible] $\wedge$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq$ [illegible] $\leq j^{sa} + j_{sa}$ [illegible] $- j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_i} > D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big)$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}$ [illegible] $= j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}$: [illegible] $\wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq$ [illegible] $< n \wedge I = \mathbb{k} >$ [illegible] $\wedge$

$j_{sa} \leq j_{sa}^{i} -$ [illegible] $j_{sa}^{ik} = j$ [illegible] $- 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}$: [illegible] $\wedge$

$s > 4 \wedge \boldsymbol{s} =$ [illegible] $+ \mathbb{k} \wedge$

$\mathbb{k}_z$: [illegible] $1)\big) \Rightarrow$

$$_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = 0$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{(\boldsymbol{l_i} + j_{sa} - k - s + 1)}
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$j_{\dots}^{DSD}{}_{i\dots} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}^{(\boldsymbol{l_{sa}} - k + 1)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik} + 1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_s}+j_{sa}-k)}\sum_{(j^{sa}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}-D-1)}^{}\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}\big)!}\cdot$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}\sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_{sa}}-k+1)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

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$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik} + 1)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{s}-s=\boldsymbol{l_s}\wedge$

$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}{:}\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\right\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}{:}\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa}\cdots,j_{sa}^{i}\right\}\wedge$

$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$

$\mathbb{k}_z{:}\,z=1)\big)$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}\sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_s}+j_{sa}-k)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-\ -2\cdot j_{sa}^{ik}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k\ )!\cdot(\ -2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}_{\boldsymbol{s}}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}\ _{a}^{ik}-j_{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{\ }=\boldsymbol{l_{ik}} \wedge \boldsymbol{l}_{\ }-j_{sa}-s=\ \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge\ _{s} \leq j_{sa}^{ik}-1$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\ \ j_{sa}^{i}\right\} \wedge$

$s\ \ 3 \wedge \boldsymbol{s}=\ \ \wedge$

$(D\ \ \boldsymbol{n}<n \wedge I=\ \ >0 \wedge$

$j_{sa} \leq j_{sa}\ \ 1 \wedge j_{sa}^{ik}=j_{s}\ \ 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{i}\ \ j_{sa}\right\} \wedge$

$s\ \ 4 \wedge\ \ s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\ \ \Rightarrow$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\ \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

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$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_i}+j_{sa}-k-s+1)} \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_{sa}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+}^{(\ )} \quad -j^{sa}-\mathbb{k})$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s \quad -j_{sa}^{ik}-1\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}- \quad -j^{sa}-s \quad -j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s} \quad k-1)!}{ \quad -k+ \quad !\cdot(j_s-2)!}\cdot$$

$$\frac{(D- \quad)!}{(D+j^{sa}+s-\boldsymbol{n} \quad -j_{sa})! \quad (\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j^{ik} \quad \leq j_{ik} \leq \quad +j_{sa}^{ik}-j \quad \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} \quad j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik} \quad =\boldsymbol{l_{ik}} \wedge \boldsymbol{l} \quad j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I= \quad =0 \wedge\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge \quad =j_{sa} \quad 1 \wedge j_{sa}^{s} \leq \quad ^{ik}-1 \wedge$

$\boldsymbol{s}: \{ \quad \cdots, j_{sa}^{ik}, j_{sa}, \cdots \quad \} \wedge$

$> 3 \wedge \quad s) \vee$

$(D \geq \quad < n \wedge \quad 0 \wedge$

$j_{sa} \leq j_{sa}^{i} \quad 1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots \quad a, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\left.\mathbb{k}_z: z=1\right) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}-j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+j^{ik}_{sa}-j_{sa}} \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j^{ik}_{sa}+1)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum^{(n_i-j_s+1)}_{(n_{is}=}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(\ =n_{ik}+j_{ik}-j^{sa}}
$$

$$
\frac{(n_i + 2\cdot j_{ik} + j^s_{sa} + j_{sa} - j_s \quad - 2\cdot \quad - I)!}{(n_i - \boldsymbol{n} - I)!\cdot(\boldsymbol{n} + 2\cdot j_{ik} \quad j^s_{sa} + j_{sa} \quad - j_s - j \quad 2\cdot j^{ik}_{sa})!}\cdot
$$

$$
\frac{\quad - k - 1)!}{\quad - j_s - \quad 1)!\cdot(j_s - 2)!}\cdot
$$

$$
\frac{(D - \quad)!}{(D + \quad + s - \quad - \boldsymbol{l_i} - \quad)!\cdot(\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + \quad \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + \quad - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \quad \boldsymbol{n} < n \wedge I = \mathbb{k} \quad 0 \wedge$

$j_{sa} \leq j^{i}_{sa} \quad \wedge j^{ik}_{sa} = j_s \quad - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \quad j^{ik}_{sa}, j_{sa}, \quad, j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = \quad) \vee$

$\quad n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik} = j^{sa} + j^{ik}_{sa} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D}^{(\boldsymbol{l_s} + j_{sa} - k)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}} \sum_{(\quad + j_s + 1)}^{n}
$$

$$
\sum_{n_{ik} = \quad} \sum_{(n_{sa} = \quad - j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + j^s_{sa} + j_{sa} - j_s - j \quad - s - 2 \cdot j_{sa}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa} \quad j_{sa} - j_s \quad j^{sa} - s - 2 \cdot j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D \quad \boldsymbol{l_i})!}{(D + j^{sa} + \quad - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad ^{sa} \leq \boldsymbol{n} \quad _{sa} - s$

$\boldsymbol{l_{ik}} \quad ^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l} \quad + j^{ik}_{sa} \quad _{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \quad - 1 \wedge j_{sa} \quad j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j \quad j_{sa}, \cdots, j^i_{sa}\} \wedge$

$\quad = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

GÜLDÜNYA

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j^{ik}_{sa}+1)}$$

$$\sum_{j_{ik} = j^{sa} + j^{ik}_{sa} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j^{ik}_{sa})}$$

$$\sum_{n_i} \sum_{\mathbb{k}} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s}$$

$$\sum_{j_{ik} = n_{is} + j_{ik}} \sum_{(n_{sa} = n_{ik} + j^{sa} - \mathbb{k})}$$

$$\frac{(n_i + 2 \cdot j_{ik} + j^s_{sa} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j^{ik}_{sa} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} + j^s_{sa} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j^{ik}_{sa})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s - j^{ik}_{sa} \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j^{ik}_{sa} - j^{ik}_{sa} \leq j^{sa} + \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \boldsymbol{n} = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} - j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\{s, j^{ik}_{sa}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

GUDUMYA

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} +$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(\boldsymbol{l_{sa}}-$$

$$\sum_{=\boldsymbol{n}+\mathbb{k}} \sum_{=\boldsymbol{n}+\mathbb{k}-j_s+1)} \sum_{(n_i-j_s+}$$

$$\sum_{n_{ik}-} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})} \sum_{+j_s-j_{ik}}$$

$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{} - j_{sa} - j_s - j^{} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - (2 \cdot j_{ik} - j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} = D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_{} \leq j_{ik} - j_{sa}^{ik} + 1 = j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} - \boldsymbol{j_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{} < j_{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

GÜLDÜNYA

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\cdots-j_{sa}^{ik}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}(\cdots)}^{(\boldsymbol{l_{ik}}+\boldsymbol{n}+j_{sa}-D-\cdots)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}(n_{is}=\cdots-j_s+1)}^{n} \sum^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+\cdots j_{ik}(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_{\cdots}-2\cdot j_{ik}^{\cdots}+j_{sa}^{\cdots}-j_{\cdots}-s-2\cdot j_{sa}^{ik}-I\right)!}{(n_i-\cdots-I)!\cdot\left(\boldsymbol{n}+2\cdots+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}\right)!}\cdot
$$

$$
\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(D-\boldsymbol{l_i})!}{(D-\cdots-j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}
$$

$D \ge \cdots < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \le j_s \le j_{\cdots}-j_{sa}^{ik}+1 \wedge \cdots+j_{sa}^{ik}-1 \le j_{ik} \le j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+\cdots-j_{sa}^{ik} \le \cdots \le \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+\cdots=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\cdots > \cdots < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{} \sum_{(j_s = j_{ik}}^{(} \sum_{j_{sa}^{ik}+1)}$$

$$\sum_{(\boldsymbol{l_i}+j_{sa}-k} \sum_{j_{ik}} \sum_{j_{sa}} \sum_{(j^{sa}} \sum_{\boldsymbol{n}+j_{sa}-D-1)}$$

$$\sum_{(} \sum_{+1)}$$

$$\sum_{n} \sum_{n_i} \sum_{\mathbb{k}} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{} \sum_{=n_i} \sum_{-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_{} - 2 \cdot j_{ik} + j_{sa}^{s} - j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - 1 - \left(\boldsymbol{n} + 2 \cdot j_{} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < \boldsymbol{l_s} > D - + 1 \wedge$

$2 \leq j_{ik} - j_{sa} \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$j^{ik} - 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \; \sum_{(j_s = j_{ik} \; +1)}^{(\boldsymbol{l_{sa}}-k+1)} \; \sum_{j_{ik}=j^{sa}+ \; - j_{sa}}^{(j^{sa}+ \; -D-1)} \; \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \; \sum_{n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(\quad)} \; \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \; \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + 2 \quad + j_{sa}^{s} + \quad sa - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{\quad - \boldsymbol{n} - I)! \cdot (\quad 2 \quad ik + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \quad < n \wedge \boldsymbol{l_s} \quad \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i} \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{sa} \quad j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=\cdots}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}
$$

$$
\sum_{j_{ik}=\cdots + j_{sa}^{ik} - j_{sa}} \sum_{\cdots = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + \cdots + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \cdots - I)! \cdot (\cdots + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz \sum_{j_s=} \sum_{k=} \sum_{j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+\mathbb{k}-D-s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_{i} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{\left(\boldsymbol{l_i} - \boldsymbol{n} - \mathbb{k}\right)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\ldots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{\boldsymbol{l_{sa}} + j_{sa}^{ik} - \cdots + 1}^{} \sum_{j \cdots \boldsymbol{l_{sa}} + \boldsymbol{n} + j \cdots D - j_{sa}}^{(\ )} \left(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}\right)$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i \cdots \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s \dots j^{sa}} = \sum_{k=\dots}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_{ik}}\dots+1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{\dots - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
\sum_{j_{ik} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa}^{ik} - D - 1}^{j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$\left(\overset{DSD}{\underset{i\ j_{sa}}{}}\right) = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{sa}} + j_{sa}^{ik} - k - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_s}+j_{sa}^{ik}-k}\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}\big)!}\cdot$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

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$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_i}+j_{sa}^{ik}-k-s+1}\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

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$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j_{sa}^{ik} - D - j_{sa}}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_s-s=\boldsymbol{l_s}\wedge$

$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa}^{s},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$

$\mathbb{k}_z:z=1)\big)$

$$fzS^{DSD}_{j_s,j_{ik},j^{sa}}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum^{(\ )}_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_s}+j_{sa}^{ik}-k}\sum^{(\ )}_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-\ -2\cdot j_{sa}^{ik}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k\ )!\cdot(\ -2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}_{\boldsymbol{s}}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}\ _{a}^{ik}-j_{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{\ }=\boldsymbol{l_{ik}} \wedge \boldsymbol{l}_{\ }-j_{sa}-s=\ \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge\ _{s} \leq j_{sa}^{ik}-1$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\ \ j_{sa}^{i}\right\} \wedge$

$s\ \ 3 \wedge \boldsymbol{s}=\ \ \wedge$

$(D\ \ \boldsymbol{n}<n \wedge I=\ \ >0 \wedge$

$j_{sa} \leq j_{sa}\ \ 1 \wedge j_{sa}^{ik}=j_{s}\ \ 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{i}\ \ j_{sa}\right\} \wedge$

$s\ \ 4 \wedge\ \ s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1\ \ \Rightarrow$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\ \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

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$$\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_i}+j_{sa}^{ik}-k-s+1} \sum_{\left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+}^{(\ )} {}_{-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-\right._{ik}-\left.!\right.}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-\right._{}-j^{sa}-s-\left._{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}_{k}-1)!}{k+\ !\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\ )!}{(D+j^{sa}+s-\boldsymbol{n}-\ -j_{sa})!\ (\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+\ ^{ik} \leq j_{ik} \leq \ +j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}\ _{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-\ =\boldsymbol{l_{ik}} \wedge \boldsymbol{l}\ j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\left((D\ \boldsymbol{n}<n \wedge I=\ =0 \wedge\right.$

$j_{sa}^{s} \leq j_{sa}^{i}-1 \wedge\ ^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq\ ^{ik}_{sa}-1 \wedge$

$\boldsymbol{s}:\{j\ \cdots,j_{sa}^{ik},j_{sa},\cdots\ \} \wedge$

$>3 \wedge \boldsymbol{s}\ s) \vee$

$(D \geq\ <n \wedge I\ =0 \wedge$

$j_{sa} \leq j_{sa}^{i}\ \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\{j_{sa}^{s},\cdots\ _{sa}^{i},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}-j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_{sa}}+j^{ik}_{sa}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{}}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\ \mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{(n_i + 2\cdot j_{ik} + j^{s}_{sa} + j_{sa} - j_s \quad - 2\cdot \ - I)!}{(n_i - \boldsymbol{n} - I)!\cdot(\boldsymbol{n} + 2\cdot j_{ik} \quad j^{s}_{sa} + j_{sa} \quad - j_s - j \quad 2\cdot j^{ik}_{sa})!}\cdot
$$

$$
\frac{\quad - k - 1)!}{\quad - j_s - \quad 1)!\cdot(j_s - 2)!}\cdot
$$

$$
\frac{(D - \quad)!}{(D + \quad + s - \quad - \boldsymbol{l_i} - \quad)!\cdot(\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + \ \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + \quad - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \quad \boldsymbol{n} < n \wedge I = \mathbb{k} \quad 0 \wedge$

$j_{sa} \leq j^{i}_{sa} \quad \wedge j^{ik}_{sa} = j_{s} \quad - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s} \quad j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = \quad) \vee$

$\quad n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j^{ik}_{sa} + 1)}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_s}+j^{ik}_{sa}-k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j^{ik}_{sa})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(\quad + \mathbb{k} \quad j_s+1)}
$$

$$
\sum_{n_{ik} + j_s} \sum_{(n_{sa} = n_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + j^s_{sa} + j_{sa} \quad j_s - j^{sa} \quad s - 2 \cdot j_{sa} \quad\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j^s_{sa} \quad j_{sa} - j_s \quad j^{sa} - s - 2 \cdot j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{\quad \boldsymbol{l_i})!}{(D + j^{sa} + \quad - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \leq \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad {}^{sa} \leq \boldsymbol{n} \quad {}_{sa} - s$

$\boldsymbol{l_{ik}} \quad {}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_i} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} \quad) \wedge$

$j_{sa} \quad - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j \quad j_{sa}, \cdots, j^i_{sa}\} \wedge$

$\quad = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j^{ik}_{sa} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_s} + \boldsymbol{n} + j^{ik}_{sa} - D - 1}^{\boldsymbol{l_i} + j^{ik}_{sa} - k - s + 1} \sum^{(\ )} \left(j^{sa} = j_{ik} \ldots_{sa} - j^{ik}_{sa}\right)
$$

$$
\sum^{n} \sum^{(n_i - \ldots 1)}
$$

$$
n_i - \ldots \mathbb{k} \left(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s \ldots\right)
$$

$$
\sum^{(\ )}
$$

$$
\ldots_{ik} = n_{is} + j_s \ldots_{ik} \left(n_{sa} = n_{ik} + j_{ik} \ldots j^{sa} - \mathbb{k}\right)
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} \ldots j^s_{sa} + j_{sa} - j_s \ldots j^{sa} - s \ldots 2 \cdot j^{ik}_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + \ldots j_{ik} + j^s_{sa} + j_{sa} \ldots j_s - j^{sa} - s - 2 \cdot j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{\ldots - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(\ldots + j^{sa} + s \ldots \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D \ldots \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j \ldots + 1 \wedge j_s \ldots j^{ik}_{sa} - \ldots \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \ldots - j^{ik}_{sa} \leq j^{sa} \ldots \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \ldots = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \ldots j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ldots < n \wedge I \ldots \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^i_{sa} - \ldots \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\ldots \ldots j^{ik}_{sa}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} +$$

$$\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}^{ik}-D-1}^{\boldsymbol{l_{sa}}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik})}$$

$$\sum_{\boldsymbol{n}+\mathbb{k}}^{(n_i - j_s +} \sum_{\boldsymbol{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}=} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} \quad j_{sa} - j_s - j^{s} \quad - s - 2 \cdot j_{sa}^{ik} - I\right)!}{\left(n_i - \boldsymbol{n} \quad (\quad 2 \cdot j_{ik} \quad j_{sa}^{s} + j_{sa} \quad j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + \quad s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} \quad \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + \quad j_s + j_{sa}^{s} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} \quad + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < \quad \wedge I = \mathbb{k} = 0 \wedge$

$j_s \quad - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=1}^{(} \sum_{-j_{sa}^{ik}+1)}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}^{ik}-} \sum_{(j^{sa}=j_{ik}+j_{sa}-} \sum_{)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}\,(n_{is}} \sum_{-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+} \sum_{j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_{} - 2 \cdot j_{ik} + j_{sa} - j_s - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \le \quad \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\quad > \quad < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}} \sum_{} \sum_{j_{sa}^{ik}-1} \sum_{(} \sum_{n_i} \sum_{+\mathbb{k}\,(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)} \sum_{j_{ik}=n_{is}} \sum_{-j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{(\quad + 2 \cdot j_{ik} + j_{sa}^{s} \quad j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - \quad (\boldsymbol{n} + 2 \cdot j \quad + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \quad + 1 \wedge$

$2 \leq j \quad \leq j_{ik} - j_{sa} \quad \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad - j^{ik} \quad 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-k+1)}^{(\boldsymbol{l_{sa}}-k-\boldsymbol{n}+2)}
$$

$$
\sum_{j_{ik}=j_{sa}^{ik}+j_{sa}^{ik}-1}^{(\quad)} \sum_{(\quad - j_{sa}^{ik})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + \Delta_{ik} + j_{sa}^{s} + \quad_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{\quad_i - \boldsymbol{n} - I)! \cdot (\quad + 2 \quad_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \quad < n \wedge \boldsymbol{l_s} \quad \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{sa} \quad_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-1} \sum_{(j_s-1+\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_{ik}}-k)}
$$

$$
\sum_{n_{is}=j_s+j_{sa}^{ik}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + \cdots + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \cdots - I)! \cdot (\cdots + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz_{\left(j_{ik}^{sa}\right)} = \sum_{j_{ik}=\boldsymbol{n}+1}^{(\boldsymbol{l_s}-k+1)} \sum_{(\boldsymbol{l_s}+\boldsymbol{n}-D)}$$

$$\sum_{j_{ik}} \sum_{j_{sa}+j_{sa}^{ik}-1}^{(\ )} \left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{\left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\boldsymbol{n} \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$f_{Z}^{DSD} \quad {}_{j_{ik}, j^{sa}} \quad \sum_{(j_s = \boldsymbol{l_i} + \boldsymbol{n} - D - s + 1)} \quad \sum_{(\boldsymbol{l_{sa}} \quad - j_{sa} + 2)}$$

$$\sum_{j_{ik} = \quad j_{sa}^{ik} - 1} \quad \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \quad \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \quad \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i \quad \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s,j_{ik}}^{DSL} = \sum_{k=1}^{\boldsymbol{l_{ik}}+1} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} $$

$$ \frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{\big(\boldsymbol{l} - \boldsymbol{n} - I\big)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot $$

$$ \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot $$

$$ \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!} $$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} \sum_{k=1}^{D-\boldsymbol{n}+} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s}^{D} {}_{;sa} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_i}-k-s+2)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$\underset{j_s, j_{ik}, j^{sa}}{\circlearrowright^{DSD}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_{sa}} + \boldsymbol{n} - D - j_{sa} + 1)}^{(\boldsymbol{l_{ik}} - k - j_{sa}^{ik} + 2)}$$

$$\sum_{j_{ik} = j_s + j_{sa}^{ik} - 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$\mathcal{L}_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}\big)!}\cdot$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_i}-k-s+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )}\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

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$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_{ik}} + \boldsymbol{n} - D - j_{sa}^{ik} + 1)}^{(\boldsymbol{l_{sa}} - k - j_{sa} + 2)} \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{(\ )} \left(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}\right) \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \left(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1\right)^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_s-s=\boldsymbol{l_s}\wedge$

$\left((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge\right.$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\right\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\right\}\wedge$

$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$

$\left.\mathbb{k}_z:z=1)\right)$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )}\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

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$$D > \boldsymbol{n} < n$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - \quad - 2 \cdot j_{sa}^{ik}\right)} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1}{(\boldsymbol{l_s} - j_s - k \quad)! \cdot (\quad - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l} - j_{sa})! \cdot (\boldsymbol{l} \quad j_{sa} - j^{sa} - \quad !}$$

$$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} \quad _{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{\quad} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l} \quad j_{sa} - s = \quad \wedge$$

$$\left((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0\right.$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge \quad \leq j_{sa}^{ik} - 1$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \quad j_{sa}^{i}\right\} \wedge$$

$$s \quad 3 \wedge \boldsymbol{s} = \quad \wedge$$

$$(D \quad \boldsymbol{n} < n \wedge I = \quad > 0 \wedge$$

$$j_{sa} \leq j_{sa} \quad 1 \wedge j_{sa}^{ik} = j_{s} \quad 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{i} \quad j_{sa}\right\} \wedge$$

$$s \quad 4 \wedge \quad s + \mathbb{k} \wedge$$

$$\mathbb{k}_z : z = 1) \Rightarrow$$

$${}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_s}+\boldsymbol{n}-D)}^{(\boldsymbol{l_i}-k-s+2)}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \left(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s\right)$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \left(n_{sa}=n_{ik}+\ -j^{sa}-\mathbb{k}\right)$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s\ \ -j_{sa}^{ik}-1\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-\ -j^{sa}-s\ \ -j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}\ \ k-1)!}{\boldsymbol{l_s}\ \ k+\ !\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\ \ )!}{(D+j^{sa}+s-\boldsymbol{n}-\ -j_{sa})!\ \ (\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j^{ik}\ \ \leq j_{ik} \leq j\ \ +j_{sa}^{ik}-j\ \ \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}\ \ j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}\ \ =\boldsymbol{l_{ik}} \wedge \boldsymbol{l}\ \ j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I=\ \ =0 \wedge\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge\ \ =j_{sa}-1 \wedge j_{sa}^{s} \leq\ \ ^{ik}-1 \wedge$

$\boldsymbol{s}: \{\ \ \cdots, j_{sa}^{ik}, j_{sa}, \cdots\ \ \} \wedge$

$>3 \wedge\ \ s) \vee$

$(D \geq\ \ <n \wedge\ \ \ \ 0 \wedge$

$j_{sa} \leq j_{sa}^{i}\ \ 1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots\ \ a, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\left.\mathbb{k}_z: z=1\right) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_s}+\boldsymbol{n}-D)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)}
$$

$$
\sum_{j_{ik}=j_s+j^{ik}_{sa}-1}^{(\quad)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\quad)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=n_i-\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{ik}+j_{ik}-j^{sa})}^{(\quad)}
$$

$$
\frac{\left(n_i + 2\cdot j_{ik} + j^s_{sa} + j_{sa} - \quad - s - 2\cdot \quad - I\right)!}{(n_i - \boldsymbol{n} - I)!\cdot\left(\boldsymbol{n} + \quad j_{ik} + j^s_{sa} + j_{sa} - j_s - \quad - 2\cdot j^{ik}_{sa}\right)!}\cdot
$$

$$
\frac{\quad - k - 1)!}{\quad - j_s - \quad + 1)!\cdot(j_s - 2)!}\cdot
$$

$$
\frac{(D - \quad)!}{\quad + s - \quad - \boldsymbol{l_i} - \quad)!\cdot(\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 \quad \wedge \boldsymbol{l_{sa}} + \quad ik - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\left((D \quad \boldsymbol{n} < n \wedge I = \quad = 0 \wedge\right.$

$j_{sa} \leq j^i_{sa} \quad 1 \wedge j^{ik}_{sa} = j_{sa} \quad 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, j_{sa} \quad sa\} \wedge$

$s > 3 \wedge \boldsymbol{s} \quad s) \vee$

$\quad \boldsymbol{n} \quad t \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_s}+\boldsymbol{n}-D)}^{(\boldsymbol{l_{ik}}-k-j^{ik}_{sa}+2)}
$$

$$
\sum_{j_{ik}=j_s+j^{ik}_{sa}-1}^{(} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa}}^{)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(}^{(} j_s+1)
$$

$$
\sum_{n_{ik}=} \sum_{(n_{sa}=} {}^{(\ )}_{j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + j^{s}_{sa} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j^{ik}_{sa}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j^{s}_{sa} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad \boldsymbol{l_i})!}{(D + j^{sa} + \quad - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l}_{\quad} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \leq \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq \quad ^{sa} \leq \boldsymbol{n} + \quad - s \wedge$

$\boldsymbol{l_{ik}} - \quad ^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l}_{\quad} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} \leq D - \quad + 1 \wedge$

$1 \leq \quad j_{ik} - j_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad ^{ik} - 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\cdots s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)} \sum_{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}} \sum_{\cdots+j_{sa}^{ik}-j_{sa}\cdots=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + \cdots + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \cdots - I)! \cdot \left(\cdots + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < \cdots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$(\boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}} \sum_{(j^{sa}=\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j_s)}
$$

$$
\sum_{n_i=\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(\ )}
$$

$$
\sum_{=n} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i - 2 \cdot j_{ik} + j_{sa}^{s} - j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} + j_{sa} - k - j_s + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$$

$$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa} + 1 > \boldsymbol{l_s} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s = \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j^{ik}_{sa}+1)}^{(\quad)}
$$

$$
\sum_{j_{ik}=j^{sa}+j^{ik}_{sa}-j_{sa}} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}_{sa}-D-s)}^{(\boldsymbol{l_s}+j_{sa}-k)}
$$

$$
\sum_{n_i=} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s)}^{(n_i-\quad-1)}
$$

$$
\sum_{j_{ik}=n_{is}+} \sum_{(n_{sa}=n_{ik}-\quad-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + j^{s}_{sa} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j^{ik}_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j^{s}_{sa} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\quad - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(\quad + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > \quad - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s + j^{ik}_{sa} - \quad \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \quad j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D > \quad \leq n \wedge \boldsymbol{l_s} \quad - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{i} \quad j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$\quad \quad j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz S_{j_s, j_{ik}, j}^{DSD} \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{l_i}} \sum_{(\quad j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+\mathbb{k}-D-s}^{j_{sa}^{ik}-k-j_s+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\quad)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{\left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(\quad - \boldsymbol{n} - 1) \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$(\quad < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}-D-s}^{\boldsymbol{l_s}-k+1} \sum^{(\quad)} \quad (j_{ik} - j_{sa}^{ik})
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + 2 \cdot j_{sa}^{s} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(\quad - \boldsymbol{n} - I)! \cdot (\quad + 2 \cdot j_{sa}^{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$((D \quad < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i} \quad j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

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$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa} + 1 > \boldsymbol{l_s} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s} \{j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} +}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(\quad + j_s - j_{sa}^{ik})}
$$

$$
\sum_{\boldsymbol{n}+\mathbb{k}(\quad)}^{(n_i - j_s +} \sum_{\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=\quad + j_s - j_{ik}(\quad = n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} \quad j_{sa} - j_s - j^{s} \quad - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} \quad (\quad 2 \cdot j_{ik} \quad j_{sa}^{s} + j_{sa} \quad j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + \quad s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \quad > D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq j_s \quad j_{ik} - j_{sa}^{ik} + 1 \quad j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \quad \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$\quad j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, \ldots, sa}^{DS} = \sum_{k=\ldots}^{(\boldsymbol{l_s}+1, \ldots, (\boldsymbol{l_{sa}}, \ldots - j_{sa}+2)} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}
$$

$$
\sum_{j_{ik}=\ldots}^{j_{sa}^{ik}-1} \sum^{(\ )}_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(n_i \ldots \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}} \sum_{\boldsymbol{n}-\boldsymbol{l_i}}^{(\boldsymbol{l_{ik}}} \sum_{\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}}^{} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + \quad + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \quad - I)! \cdot \left(\quad + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\quad \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$$

$$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$$

$$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$$

$$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$$

$$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$$

$$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$$

$$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa} + 1 > \boldsymbol{l} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$D + \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} - j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}-D-s+1)}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+j_{sa}-1}^{(} \sum_{(j^{sa}=j_{ik}+j_{sa}-k)}^{(} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(\quad-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+\quad j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_{\quad} - 2 \cdot j_{ik} \quad + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \quad - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D \quad j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \quad \boldsymbol{n} < n \wedge \boldsymbol{l_s} > \quad - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{\quad} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$\quad > \boldsymbol{n} \quad n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+\cdots-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik} + 1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik} + 1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

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$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(\boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$\overset{DSD}{\underset{j_s, j_{ik}, j^{sa}}{\mathbb{O}}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(\boldsymbol{l_s} + j_{sa} - k)} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{n} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(\ )} \sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\ )} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})} \frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

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$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

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$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fz^{SD}_{j_{ik}, j^{sa}} = \sum_{k=1}^{\boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(\boldsymbol{l_s} + j_{sa} - k)} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+j_{sa}-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)) \wedge$ [illegible]

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik}=$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}$ [illegible] $\cdots, j_{sa}^{i}$ [illegible]

$s >$ [illegible] $\boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)$ [illegible]

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}}\ \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{ik}}-k+1}\ \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\vee$

$(D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$D+j_{sa}-\boldsymbol{n}<\boldsymbol{l_{sa}}\leq D+\boldsymbol{l_s}+j_{sa}-1)\wedge$

$\big((D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge \boldsymbol{s}=s+\mathbb{k}\wedge$

$(D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge \boldsymbol{s}=s+\mathbb{k}\wedge$

$\mathbb{k}_z:z=1)\big)\Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}-j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j^{ik}_{sa}-D-j_{sa}}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{\left(n_i+2\cdot j_{ik}+j^{s}_{sa}+j_{sa}-j_{s}-s-2\cdot j^{ik}_{sa}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j^{s}_{sa}+j_{sa}-j_s-j^{ik}_{sa}-2\cdot j^{ik}_{sa}\right)!}\cdot
$$

$$
\frac{-k-1)!}{-j_s-+1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(D-)!}{(D+a+s-\boldsymbol{l_i}-)!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j^{ik}_{sa}+1 \wedge j_s+j^{ik}_{sa}-1 \leq j_{ik} \leq j^{sa}+j^{ik}_{sa}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j^{ik}_{sa}+1=\wedge \boldsymbol{l_{sa}}+j-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j-j^{ik}_{sa}+1 \wedge j_s+j^{ik}_{sa}-1 \leq j_{ik} \leq j^{sa}+j^{ik}_{sa}-j_{sa} \wedge$

$j_{ik}+-j^{ik}_{sa} \leq j \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j^{ik}_{sa}+>\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j^{ik}_{sa}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$\geq \boldsymbol{n} \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j^{ik}_{sa}+1 \wedge j_s+j^{ik}_{sa}-1 \leq j_{ik} \leq j^{sa}+j^{ik}_{sa}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j^{ik}_{sa}+1>\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j^{ik}_{sa}-j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)$

$\big((D \geq \boldsymbol{n} < n \wedge \mathbb{k} = 0 \wedge$

$j_{sa}^{s} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa}^{s} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge \mathbb{k} = \mathbb{k} > 0 \wedge$

$j_{sa}^{s} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik} - \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ \ )}$$

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$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+\quad -j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + 2\cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - \quad ik - \quad !\right.}{(n_i - \boldsymbol{n} - I)!\cdot\left(\boldsymbol{n} + 2\cdot j_{ik} + j_{sa}^{s} + j_{sa} - \quad - j^{sa} - s - \quad ik\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}\quad k-1)!}{\quad k+\quad !\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\quad)!}{(D+j^{sa}+s-\boldsymbol{n}-\quad -j_{sa})!\quad \boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + \quad - j_{sa}^{ik} \leq j \quad + j_{sa}^{ik} - j \quad \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} \quad _{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - \quad > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \quad < n \wedge \boldsymbol{l_s} > \quad - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - \quad + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} \quad _{sa} - j_{sa}^{ik} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} \quad s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} \quad 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \quad j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \quad < n \wedge \quad \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{sa} \quad _{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$$

$$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - \wedge j_{sa}^{s} \leq j_{sa}^{} - 1 \wedge$$

$$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$$

$$s > 3 \wedge \boldsymbol{s} = s) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa} - j_{sa} - j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \{j_{sa}^{s}, \cdots j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots j_{sa}^{i}\} \wedge$$

$$s > 4 \wedge \boldsymbol{s} = \mathbb{k} \wedge$$

$$\mathbb{k} =) \Rightarrow$$

$${}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j_{sa}^{ik} - D - j_{sa}}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + 2\cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2\cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)!\cdot\left(\boldsymbol{n} + 2\cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - \quad - 2\cdot j_{sa}^{ik}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1}{(\boldsymbol{l_s} - j_s - k \quad)!\cdot(\quad - 2)!}\cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l} - j_{sa})!\cdot(\boldsymbol{n} \quad j_{sa} - j^{sa} - j}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} \quad s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}(}^{n} \sum_{(}^{(}{}_{j_s+1)}
$$

$$
\sum_{n_{ik}=} \sum_{(n_{sa}=}^{(} {}_{j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + 2\cdot j_{ik} + j_{sa}^{s} + j_{sa}^{} \quad j_s - j^{} \quad s - 2\cdot j_{sa}^{}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2\cdot j_{ik} + j_{sa}^{} \quad j_{sa} - j_s \quad j^{sa} - s - 2\cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad \boldsymbol{l_i})!}{(D + j^{sa} + \quad - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l}_{} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + \quad \wedge j_s + j_{sa}^{ik} - 1 \leq \quad \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \quad \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} \leq D - \quad + 1 \wedge$

$1 \leq \quad j_{ik} - j_{sa} \quad + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}} \sum_{(j_s-\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_{ik}}-k)} \sum_{j_{ik}=j_s+j_{sa}^{ik}}^{} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + \cdots + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \cdots - I)! \cdot \left(\cdots + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < \cdots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$(\boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \binom{}{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-s+1)}
$$

$$
\sum_{j_{ik}+j_{sa}^{ik}-1}^{} \binom{}{(j_{ik}+j_{sa}-j_{sa}^{ik})}
$$

$$
\sum_{n_i}^{n} \binom{}{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}}^{} \binom{}{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{(n_i + 2 \cdot j_{ik} + j_{sa}^{s} - j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - \cdots (\boldsymbol{n} + 2 \cdot j_{\cdots} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$((D \geq \boldsymbol{n} \cdots \wedge \boldsymbol{l_s} > D \cdots \boldsymbol{n} + 1 \wedge$

$2 \leq \cdots < j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\cdots j_{sa}^{ik} - 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}-} \sum_{+j_{ik}+j_{sa}-j_{sa}^{ik})}
$$

$$
(n_i-j_s
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}} \sum_{=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}} \sum_{+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa} \right. j_{sa} - j_s - j \left. - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - \left. + 2 \cdot j_{ik} \right. j_{sa}^{s} + j_{sa} \left. j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + \left. s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa}\right)! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\left((D \geq \boldsymbol{n} < n \wedge \right. > D - \left. + 1 \wedge \right.$

$2 \leq \left. \leq j_{ik} - j_{sa}^{ik} + \right. j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \left. ^{ik} \leq j^{sa} \leq \right. + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \left. ^{ik} + 1 > \boldsymbol{l_s} \right. \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \left. \right. \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$\left. < j \right. ^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1)) \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s,j_{ik}}^{DS} = \sum_{k} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}
$$

$$
\sum_{j^{sa} + j_{sa}^{ik} -} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(n_i \quad \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{jz}S_{j_s, j_{ik}, j^{sa}}^{SDSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_{ik}} + \boldsymbol{n} - D}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1>\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}})\vee$

$(D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1>\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$D+j_{sa}^{ik}-\boldsymbol{n}<\boldsymbol{l_{ik}}\leq D+\boldsymbol{l_s}+j_{sa}^{ik}-\boldsymbol{n}-1\big)\wedge$

$\big((D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge \boldsymbol{s}=s)\vee$

$(D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge \boldsymbol{s}=s+$

$\mathbb{k}_z:z=1)\big)\rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}}\sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-\ -2\cdot j_{sa}^{ik}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k\ )!\cdot(\ -2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_{ik}}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}\ _{sa}^{ik}-j_{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{\ }=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_{\ }}-j_{sa}-s=\ \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge\ _{\ } \leq j_{sa}^{ik}-1$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\ \ j_{sa}^{i}\right\} \wedge$

$s\ \ 3 \wedge \boldsymbol{s}=$

$(D\ \ \boldsymbol{n} < n \wedge I=\ \ > 0 \wedge$

$j_{sa} \leq j_{sa}\ \ 1 \wedge j_{sa}^{ik}=j_{s}\ \ 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{i}\ \ j_{sa}\right\} \wedge$

$s\ \ 4 \wedge\ \ s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1\ \Rightarrow$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\ \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}\ \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_i}+j_{sa}-k-s+1)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-\quad-2\cdot j_{sa}^{ik}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k\quad)!\cdot(\quad-2)!}\cdot$$

$$\frac{(D-\quad)!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}\quad\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_{ik}}}$$

$D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}\quad_{sa}^{ik}-j_{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{\quad}=\boldsymbol{l_{ik}}\wedge\boldsymbol{l}_{\quad}-j_{sa}-s=\quad\wedge$

$\left((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}=0\right.$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge\quad\leq j_{sa}^{ik}-1$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\quad,j_{sa}^{i}\}\wedge$

$s\quad 3\wedge\boldsymbol{s}=\quad\wedge$

$(D\quad\boldsymbol{n}<n\wedge I=\quad>0\wedge$

$j_{sa}\leq j_{sa}\quad 1\wedge j_{sa}^{ik}=j_{s}\quad-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{\quad}\quad_{sa}\}\wedge$

$s\quad 4\wedge\quad s+\mathbb{k}\wedge$

$\mathbb{k}_z:z=1)\quad\Rightarrow$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\ \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}\ \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D)}^{(\boldsymbol{l_{sa}}-k+1)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - \quad - 2 \cdot j_{sa}^{ik}\right)} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1}{(\boldsymbol{l_s} - j_s - k \quad)! \cdot (\quad - 2)!} \cdot$$

$$\frac{(D - \quad)!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} \quad \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_{ik}}}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} \quad _{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j \quad = \boldsymbol{l_{ik}} \wedge \boldsymbol{l} \quad j_{sa} - s = \quad \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge \quad \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \quad j_{sa}^{i}\} \wedge$

$s \quad 3 \wedge \boldsymbol{s} = \quad \wedge$

$(D \quad \boldsymbol{n} < n \wedge I = \quad > 0 \wedge$

$j_{sa} \leq j_{sa} \quad 1 \wedge j_{sa}^{ik} = j_s \quad 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik} \quad j_{sa}\} \wedge$

$s \quad 4 \wedge \quad s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1) \quad \Rightarrow$

$$_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{(j^{sa}=\boldsymbol{l_{ik}}+\boldsymbol{n}+j_{sa}-D-j_{sa}^{ik})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_{}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+}^{(\ )} \quad -j^{sa}-\mathbb{k})$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-\right.}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-\right.} \cdot$$

$$\frac{(\boldsymbol{l_s}-1)!}{\quad k+\quad \cdot(j_s-2)!} \cdot$$

$$\frac{(\quad -\boldsymbol{l_i})!}{(D+j^{sa}-\quad -\boldsymbol{l_{sa}})!\quad +\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+$ $\quad j_{ik} \leq \quad +j_{sa}^{ik}-$ $\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}$ $\quad -s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-$ $=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}$ $j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq$ $< n \wedge I =$ $=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge$ $=j_{sa}$ $1 \wedge j_{sa}^{s} \leq$ $-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots$ $\} \wedge$

$s > 3 \wedge \boldsymbol{s}$ $s) \vee$

$(D \geq$ $< n \wedge I$ $=0 \wedge$

$j_{sa} \leq j_{sa}^{i}$ $\wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\{j_{sa}^{s}, \cdots$ $_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{(j^{sa}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}-D-1)}^{(\boldsymbol{l_s}+j_{sa}-k)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{\left(n_i + 2\cdot j_{ik} + j^s_{sa} + j_{sa} - \right)!}{(n_i - \boldsymbol{n} - I)!\cdot\left(\boldsymbol{n} + \right)} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{ - j_s + 1)!\cdot(j_s - 2)!} \cdot
$$

$$
\frac{(\quad - \boldsymbol{l_i})!}{(D + \quad - \boldsymbol{n} - \boldsymbol{l_{ik}})!\cdot(\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n}$ $\wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j_{sa}$ $1 \leq j_{ik} \leq$ $+ j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} +$ $- j^{ik}_{sa} \leq j$ $\leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1$ $\wedge \boldsymbol{l_{sa}}$ $- j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D$ $\boldsymbol{n} < n \wedge I =$ $= 0 \wedge$

$j_{sa} \leq j^{i}_{sa}$ $1 \wedge j^{ik}_{sa} = j_{sa}$ $- 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, j_{sa}$ $sa\} \wedge$

$s > 3 \wedge \boldsymbol{s}$ $s) \vee$

$(D \geq \boldsymbol{n}$ $\wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_{sa}}-k+1)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\quad)}
$$

$$
\frac{\left(n_i + 2\cdot j_{ik} + j^s_{sa} + j_{sa} - \quad - s - 2\cdot \quad - I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+\quad j_{ik}+j^s_{sa}+j_{sa}-j_s-\quad-2\cdot j^{ik}_{sa}\right)!}\cdot
$$

$$
\frac{(\boldsymbol{l_s}-k-1)!}{\quad -j_s-\quad+1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{\quad-\boldsymbol{l_i})!}{(D+\quad-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j_{sa} \quad 1 \leq j_{ik} \leq \quad ^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j \quad \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 \quad \wedge \boldsymbol{l_{sa}} \quad ^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\left((D \quad \boldsymbol{n} < n \wedge I = \quad = 0 \wedge\right.$

$j_{sa} \leq j^{i}_{sa} \quad 1 \wedge j^{ik}_{sa} = j_s \quad - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, j_{sa} \quad ^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} \quad s) \vee$

$(D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j^{ik}_{sa}+1)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{\left(n_i + 2\cdot j_{ik} + j^s_{sa} + j_{sa} - \right.}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+\right.} \cdot
$$

$$
\frac{(\boldsymbol{l_{ik}}-k-1)!}{(\boldsymbol{l_{ik}}-j_s+1)!\cdot(j_s-2)!} \cdot
$$

$$
\frac{(\boldsymbol{l_{sa}}-\boldsymbol{l_i})!}{(D+\boldsymbol{l_{sa}}-\boldsymbol{n}-\boldsymbol{l_{ik}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n}$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{s}_{sa}$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} + \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_{sa}} + j_{sa} - j_{sa} \wedge \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\left((D \right.$

$j_{sa} \leq j^{i}_{sa}$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, j_{sa}$

$s > 3 \wedge \boldsymbol{s}$

$D > \boldsymbol{n}$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s}$$

$$\sum_{n_i = \boldsymbol{n}}^{n} \sum_{= \boldsymbol{n} + j_s + 1)}$$

$$\sum_{n_i} \sum_{(n_{sa} = \quad + j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{\big(n_i + 2 \cdot j_{ik} + j^s_{sa} + j_{s} - j_s - j_{} - s - 2 \cdot \quad)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{s} + j_{sa} - j_{} - j^{sa} - s - 2 \cdot j^{ik}_{sa}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} \quad k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{\quad - \boldsymbol{l_i})!}{(D \quad j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_{} \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \quad j_{} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad j^{sa} \leq \boldsymbol{n} \quad j_{sa} - s \quad$

$\boldsymbol{l_{ik}} \quad ^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \quad + j^{ik}_{sa} \quad _{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D \geq \boldsymbol{n} \quad n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j \quad - 1 \wedge j \quad _{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j \quad j_{sa}, \cdots, j^i_{sa}\} \wedge$

$> 3 \wedge \quad s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}^{(\boldsymbol{l_i} + j_{sa} - k - s + 1)} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D}$$

$$\sum_{n_i = \boldsymbol{n}}^{n} \sum_{= \boldsymbol{n} +}^{(\ j_s + 1)}$$

$$\sum_{} \sum_{(n_{sa} = + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + 2 \cdot j_{ik} + j^s_{sa} + j_{s} - j_s - j_{} - s - 2 \cdot j^{ik}_{sa}\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{s} + j_{sa} - j_{} - j^{sa} - s - 2 \cdot j^{ik}_{sa}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - j^{sa} - \boldsymbol{n} - \boldsymbol{l_i})!}{(D - j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_{} \leq j_{ik} - j^{ik}_{sa} + \wedge j_s + j^{ik}_{sa} - 1 \ j_{} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \ j^{sa} \leq \boldsymbol{n} \ j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} \ ^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \ + j^{ik}_{sa} \ _{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D \geq \boldsymbol{n} \ m \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j \ - 1 \wedge j \ _{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s} : \{j^s_{sa}, \cdots, j \ j_{sa}, \cdots, j^i_{sa}\} \wedge$

$> 3 \wedge \ s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s} : \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j^{ik}_{sa} + 1)}$$

$$\sum_{n_i = \boldsymbol{n} + \cdots}^{n} \sum_{\cdots \boldsymbol{n} + \cdots (j_s + 1)}^{(\cdots j_s + 1)}$$

$$\sum_{n_{ik} = \cdots} \sum_{(n_{sa} = \cdots j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + 2 \cdot j_{i\cdots} + j^{s}_{sa} + j_{s\cdots} - j_s - j_{\cdots} - s - 2 \cdot j_{sa\cdots}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa\cdots} - j_{sa} - j_{s\cdots} - j^{sa} - s - 2 \cdot j^{ik}_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \geq D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_{\cdots} \leq j_{ik} - j^{ik}_{sa} + \cdots \wedge j_s + j^{ik}_{sa} - 1 \leq \cdots \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} - \cdots j^{sa} \leq \boldsymbol{n} \cdots j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} \cdots j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \cdots + j^{ik}_{sa} - \cdots_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} \cdots n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq \cdots - 1 \wedge j_{sa} \cdots j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j_{\cdots} j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$\cdots 3 \wedge \cdots = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}^{(\boldsymbol{l_s} + j_{sa} - k)} \sum_{(j^{sa} = \ldots + \boldsymbol{n} - D)}^{\ldots} \sum_{\ldots}^{(n_i - \ldots + 1)} \sum_{\ldots + \mathbb{k}}^{\ldots} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - \ldots)}^{\ldots} \sum_{n_{ik} = n_{is} - \ldots + j_{ik}}^{(\ )} \sum_{(n_{sa} = \ldots - j^{sa} - \mathbb{k})}^{\ldots}$$

$$\frac{\big(n_i + 2 \cdot j_{ik} + j^s_{sa} + j_{sa} - \ldots - j^{sa} - \ldots - 2 \cdot j^{ik}_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + \ldots \cdot j_{ik} + j^s_{sa} + j_{sa} - \ldots - j_s - \ldots - s - 2 \cdot j^{ik}_{sa}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\ldots - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + \ldots^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \ldots < n \wedge \boldsymbol{l_s} > \ldots - \boldsymbol{n} + 1 \wedge$

$2 \ldots j_s \leq j_{ik} - \ldots^{ik} + 1 \wedge \ldots + j^{ik}_{sa} - 1 \ldots \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} \ldots_{sa} - j^{ik}_{sa} \leq j^{\ldots} \ldots \boldsymbol{n} + j_{sa} \ldots s \wedge$

$\ldots_{ik} - j^{ik}_{sa} \ldots 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \ldots j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D > \boldsymbol{n} < n \wedge \ldots = 0 \wedge$

$j_{sa} \leq j^i_{sa} \ldots \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\ldots \{j^s_{sa}, \ldots, \ldots_{sa}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s} : \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}^{(\boldsymbol{l_i} + j_{sa} - k - s + 1)} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j^{ik}_{sa})}^{(\ )}$$

$$\sum_{n_{ik} = n_{is} + \mathbb{k}}^{(n_i - \boldsymbol{n} + 1)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_{sa})}^{(\ )}$$

$$\sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + 2 \cdot j_{ik} + j^s_{sa} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j^{ik}_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j^s_{sa} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j^{ik}_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik} + 1 \wedge j_{sa} - j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} - j_{sa} - j^{ik}_{sa} \leq j^{sa} - \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} - 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} - j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge \right. = 0 \wedge$

$j_{sa} \leq j^i_{sa} - \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\{j^s \quad {}^k_{sa}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_i}}^{(\ )}
$$

$$
\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{(\boldsymbol{l_{sa}} - 1)} \left(j^{sa} \right. \left. + j_{sa} - j_{sa}^{ik}\right)
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}} \sum_{(n_i - j_s = \boldsymbol{n} + \mathbb{k} - j_s + 1)}
$$

$$
\sum_{n_{ik}} \sum_{= n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa} - j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{\left(n_i - \boldsymbol{n} - \mathbb{k} + 2 \cdot j_{ik} - j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(\quad + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} \quad {}^{ik}_{sa} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} \quad {}^{ik} + 1 = \quad \boldsymbol{sa} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$\quad {}^{i} \quad 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s - \cdots + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{(\cdots=\boldsymbol{l_{ik}}+\boldsymbol{n}+j_{sa}-D-\cdots)}^{(\boldsymbol{l_s}+j_{sa}-\cdots)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(\cdots-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+\cdots+j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{(n_{\cdots} - 2 \cdot j_{ik} - \cdots + j_{sa} - \cdots - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I)!}{(n_i - \cdots - I)! \cdot (\boldsymbol{n} + 2 \cdot \cdots + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \cdots \leq n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq \cdots - j_{sa}^{ik} + 1 \wedge \cdots + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \cdots - j_{sa}^{ik} - \cdots \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \cdots = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D > \cdots n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{} \sum_{(j_s = j_{ik} - \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{D-\boldsymbol{n}+1} \binom{}{}$$

$$(\boldsymbol{l_i} + j_{sa} - \quad)$$

$$j_{ik} \sum_{} \sum_{\boldsymbol{l_{ik}} - \boldsymbol{l_{sa}} (j^{sa} \quad \boldsymbol{n} + j_{sa} - D - 1)}$$

$$\binom{}{j_s + 1}$$

$$\sum_{} \sum_{n_i \quad + \mathbb{k} (n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}$$

$$\sum_{} \sum_{n_{ik} = n_{is} + \quad j_{ik} (n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{\binom{}{}}$$

$$\frac{(\quad + 2 \cdot j_{ik} + j_{sa}^{s} \quad j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - \quad \cdot (\boldsymbol{n} + 2 \cdot j \quad + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \quad + 1 \wedge$

$2 \leq j \quad \leq j_{ik} - \quad \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} \quad {}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad - j_{sa}^{ik} \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{(j_s = j_{ik} - \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{D-\boldsymbol{n}+1} \sum_{(\boldsymbol{l_{sa}} - k)}$$

$$\sum_{j_{ik} \quad \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{(j^{sa} \quad \boldsymbol{n} + j_{sa} - D - 1)}$$

$$\sum_{(\quad j_s + 1)}$$

$$\sum_{n_{i} \quad + \mathbb{k}} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + \quad j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{(\quad + 2 \cdot j_{ik} + j_{sa}^{s} \quad j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - \quad \cdot (\boldsymbol{n} + 2 \cdot j \quad + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \quad + 1 \wedge$

$2 \leq j \leq j_{ik} - \quad \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} \quad ^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad - j_{sa}^{ik} \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{(j_s = j_{ik} \ldots \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{D-\boldsymbol{n}+1} \sum_{(\boldsymbol{l_{ik}} + j_{sa} - k \ldots 1)}^{(\quad)}$$

$$\sum_{j_{ik} \ldots - \boldsymbol{l_{sa}}} \sum_{(j^{sa} \ldots \boldsymbol{n} + j_{sa} - D - 1)}$$

$$\sum_{n_i \ldots + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} \ldots - j_{ik}}^{(\quad)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{(n_i + 2 \cdot j_{ik} + j_{sa}^{s} \ldots j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - \ldots (\boldsymbol{n} + 2 \cdot j \ldots + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < \ldots \wedge \boldsymbol{l_s} > D - \ldots + 1 \wedge$

$2 \leq \ldots \leq j_{ik} - j_{sa} \ldots \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \ldots \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\ldots - j^{ik} \ldots 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \left(\right.
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_i}+j_{sa}^{ik}-k-s+1} \left(\right. \sum_{\left. -\boldsymbol{l_{ik}}\right)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{\left(\right)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + 2 \cdot j_{sa}^{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{sa}^{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} = \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\boldsymbol{n} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} ^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}
$$

$$
\boldsymbol{l_{sa}} + j_{sa} - j_{sa} + \quad)
$$

$$
\sum_{j_{ik}=\boldsymbol{l}_{\boldsymbol{s}}\boldsymbol{n}+j_{sa}^{ik}-D} \quad \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + \quad + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \quad - I)! \cdot \left(\quad + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$< j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fz^{S}_{j_s} \quad \sum_{\quad} \quad \sum_{\quad + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D} \quad \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \quad \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \quad \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{(\quad + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I)!}{\quad - \boldsymbol{n} - \quad (\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\quad > \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz^{S} \left(j_{s} \right) \sum_{\left(i_{s}=\boldsymbol{l_s}+\boldsymbol{l_{ik}}\right)}^{D-1} \sum_{\left(i_{s}=\boldsymbol{l_s}+\boldsymbol{l_{ik}}\right)}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{n}}^{\boldsymbol{l_s}+j_{sa}^{ik}-D-1} \sum_{\left(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}}\right)}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{\left(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1\right)}^{\left(n_i-j_s+1\right)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{\left(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}\right)}^{(\ )}$$

$$\frac{\left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_{s} - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{\left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_{s} - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\boldsymbol{n} \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{\quad} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\quad)}$$

$$\boldsymbol{l_{sa}} + j_{s} - k - j_{sa} + 1 \qquad \sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} - \mathbb{k} - D - s}^{(\quad)} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(n_i \quad \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s}^{\boldsymbol{D-n+1}} {}_{j^{sa}} = \sum_{k=1}^{\boldsymbol{D-n+1}} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{ik}} - 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(\boldsymbol{n} - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$S_{\dots}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j_{sa}^{ik} - D - j_{sa}}^{\boldsymbol{l_i} + j_{sa}^{ik} - k - s + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j_{sa}^{ik} - D - j_{sa}}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j_{sa}^{ik} - D - j_{sa}}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_i}+j_{sa}^{ik}-k-s+1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

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$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} -$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq$ $_{a}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} =$ $+ \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_{ik}} + \boldsymbol{n} - D}^{\boldsymbol{l_{sa}} + j_{sa}^{ik} - k - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$\big((D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge \boldsymbol{s}=s)\vee$

$(D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge \boldsymbol{s}=s+\mathbb{k}\wedge$

$\mathbb{k}_z:z=1)\big)$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_s}+j_{sa}^{ik}-k}\sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-\ -2\cdot j_{sa}^{ik}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k\ )!\cdot(\ -2)!}\cdot$$

$$\frac{(D-\ )!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}\ \boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l}}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}\ _{sa}^{ik}-j_{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{\ }=\boldsymbol{l_{ik}} \wedge \boldsymbol{l}_{\ }-j_{sa}-s=\ \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge\ \leq j_{sa}^{ik}-1$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\ \ j_{sa}^{i}\right\} \wedge$

$s\ \ 3 \wedge \boldsymbol{s}=$

$(D\ \ \boldsymbol{n}<n \wedge I=\ \ >0 \wedge$

$j_{sa} \leq j_{sa}\ \ 1 \wedge j_{sa}^{ik}=j_{s}\ \ 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{i}\ \ j_{sa}\right\} \wedge$

$s\ \ 4 \wedge\ \ s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\ \ \Rightarrow$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\ \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}^{ik}-D-1}^{\boldsymbol{l_i}+j_{sa}^{ik}-k-s+1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+\cdots-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-\cdots-j_{sa}^{ik}-\cdots\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-\cdots-j^{sa}-s-\cdots-j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-\cdots-k-1)!}{\cdots-k+\cdots!\cdot(j_s-2)!}\cdot$$

$$\frac{(\cdots-\boldsymbol{l_i})!}{(D+j^{sa}-\cdots-\boldsymbol{l_{sa}})!\cdots+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+\cdots \leq j_{ik} \leq \cdots+j_{sa}^{ik}-\cdots \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}\cdots_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-\cdots=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}\cdots j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I=\cdots=0 \wedge\right.$

$j_{sa}^{s} \leq j_{sa}^{i}-1 \wedge \cdots j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq \cdots_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{\cdots, j_{sa}^{ik}, j_{sa}, \cdots\} \wedge$

$\cdots > 3 \wedge \cdots s) \vee$

$(D \geq \cdots < n \wedge \cdots 0 \wedge$

$j_{sa} \leq j_{sa}^{i} \cdots \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\cdots\{j_{sa}^{s}, \cdots, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\left.\mathbb{k}_z: z=1\right) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{n}+j^{ik}_{sa}-D-1}^{\boldsymbol{l_{sa}}+j^{ik}_{sa}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l}}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\ \ \mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{\left(n_i + 2\cdot j_{ik} + j^s_{sa} + j_{sa} - j_{s} \quad s - 2 \quad ^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \quad j_{ik} \quad j^s_{sa} + j_{s} \quad - j_s - j \quad 2\cdot j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{\boldsymbol{l} \quad - k - 1)!}{\quad - j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad - \boldsymbol{l_i})!}{(D + j \quad - \boldsymbol{n} - \boldsymbol{l} \quad)! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} \quad \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{s}_{sa} \quad 1 \leq j_{ik} \leq \quad ^{a} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{s} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + \quad ^{ik} - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\left((D \quad \boldsymbol{n} < n \wedge I = \quad = 0 \wedge\right.$

$j_{sa} \leq j^{i}_{sa} \quad 1 \wedge j^{ik}_{sa} = j_{s} \quad - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \left\{j^{s} \quad \cdots, j^{ik}_{sa}, j_{sa} \quad j_{sa}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} \quad) \vee$

$\quad > \boldsymbol{n} \quad t \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \left\{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik} = \boldsymbol{l_s} + \boldsymbol{n} + j^{ik}_{sa} - D - 1}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}}}$$

$$\sum_{n_i = \boldsymbol{n} +}^{n} \sum_{(\quad - \boldsymbol{n} + \quad j_s + 1)}$$

$$\sum_{n_{ik} = \quad} \sum_{(n_{sa} = \quad + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{\left(n_i + 2 \cdot j_{ik} + j^{s}_{sa} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j^{ik}_{sa}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa} - j_{sa} - j^{sa} - s - 2 \cdot j^{ik}_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(\quad - \boldsymbol{l_i})!}{(\quad - j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad j^{sa} \leq \boldsymbol{n} \quad j_{sa} - s$

$\boldsymbol{l_{ik}} \quad {}^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \quad + j^{ik}_{sa} \quad _{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D \geq \boldsymbol{n} \quad n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq \quad - 1 \wedge j_{sa} \quad j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, \quad j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$\quad 3 \wedge \quad - s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_i}-k-s+2)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_{is}=\boldsymbol{n}+\mathbb{k}} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_{ik}+1)}^{(n_i-\ +1)}$$

$$\sum_{n_{ik}=n_{is}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_{sa}^{ik} - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + \ \cdot j_{ik} + j_{sa}^{s} + j_{sa}^{ik} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_{ik}} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \ < n \wedge \boldsymbol{l_s} > \ - \boldsymbol{n} + 1 \wedge$

$2 \ j_s \leq j_{ik} - \ + 1 \wedge \ + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} \ _{sa} - j_{sa}^{ik} \leq j^{ \ } < \boldsymbol{n} + j_{sa} \ s \wedge$

$_{ik} - j_{sa}^{ik} \ 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \ j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\left((D \geq \boldsymbol{n} < n \ \ \ = 0 \wedge\right.$

$j_{sa} \leq j_{sa}^{i} \ \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\ \{j_{sa}^{s}, \ \ _{sa}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s} : \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_{sa}} + \boldsymbol{n} - D - j_{sa} + 1)}^{(\boldsymbol{l_{sa}} - k - j_{sa} + 2)}
$$

$$
\sum_{j_{ik} = j_s + \boldsymbol{l_{ik}} - \boldsymbol{l_s}} \sum_{(j^{sa} = j}^{(\quad)}
$$

$$
\sum_{(n_i - \quad + 1)}
$$

$$
\sum_{+\mathbb{k}\ (n_{is} = \boldsymbol{n} + \mathbb{k} -}
$$

$$
\sum_{n_{ik} = n_{is}}^{(\quad)} \quad \sum_{j_{ik}\ (n_{sa} = \quad - j_{ik}\ (n_{sa} - \mathbb{k})}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + j^s_{sa} + j_{sa} - j_{\quad} - j^{sa} - \quad - 2 \cdot j^{ik}_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + \quad \cdot j_{ik} + j^s_{sa} + j_{\quad} - j_s - j_{\quad} - s - 2 \cdot j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + \quad^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \quad < n \wedge \boldsymbol{l_s} > \quad - \boldsymbol{n} + 1 \wedge$

$2 \quad j_s \leq j_{ik} - \quad + 1 \wedge j \quad + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} \quad _{sa} - j^{ik}_{sa} \leq j^{\quad} < \boldsymbol{n} + j_{sa} \quad s \wedge$

$\quad_{ik} - j^{ik}_{sa} \quad 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \quad j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge \quad - \quad = 0 \wedge$

$j_{sa} \leq j^i_{sa} \quad \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\quad \left\{j^s_{sa}, \cdots, \quad_{sa}, j_{sa}, \cdots, j^i_{sa}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s} : \left\{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\right\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j^{ik}_{sa}+1)}^{(\boldsymbol{l_{ik}}-k-j^{ik}_{sa}+2)}
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\quad)} \sum_{(j^{sa}=j_{i}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\quad)}
$$

$$
\sum_{n_i=\quad+\mathbb{k}}^{(n_i-\quad-1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s-\quad)}^{(\quad)}
$$

$$
\sum_{j_{ik}=n_{is}+j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+\quad-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + j^s_{sa} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j^{ik}_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j^s_{sa} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\quad - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s - j^{ik}_{sa} - \quad \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{sa} - \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} - j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \quad < n \wedge I \quad = 0 \wedge$

$j_{sa} \leq j^i_{sa} - \quad \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\{s, \quad j^{ik}_{sa}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_s}+\boldsymbol{n}-1}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}} \sum_{=j_{ik}+\boldsymbol{l_{ik}})}$$

$$(n_i - j_s$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}} \sum_{=\boldsymbol{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa} - j_s - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(n_{ik} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(\quad + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l}_{\boldsymbol{j}} = D - \boldsymbol{n} + 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} \quad {}^{ik}_{sa} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad {}^{ik} + 1 = \quad \boldsymbol{a} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$\quad < j^{i} \quad 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}} \sum_{=j_{ik}+\boldsymbol{l_{ik}})} (n_i - j_s$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}} \sum_{=\boldsymbol{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}=j_s+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa} + j_{sa} - j_s - j - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot (n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(\quad + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_{} } > D - \boldsymbol{n} + 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad \wedge j_s + j_{s} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} \quad j_{sa}^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad ^{ik} + 1 = \quad \boldsymbol{a} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$\quad < j^{i} \quad 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)} \sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(} \sum_{(n_i-j_s}^{(j_{ik}+\boldsymbol{l_{ik}})} \sum_{n_i:=\boldsymbol{n}+\mathbb{k}}^{(} \sum_{n_{ik}}^{(n_i=\boldsymbol{n}+\mathbb{k}-j_s+1)} \sum_{+j_s-j_{ik}}^{(} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(n_{ik}+j_s-j_{ik}+1)}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa} \quad j_{sa} - j_s - j \quad - s - 2 \cdot j_{sa}^{ik} - I\right)!}{\left(n_i - \boldsymbol{n} - \quad + 2 \cdot j_{ik} \quad j_{sa}^{s} + j_{sa} \quad j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(\quad + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad \wedge j_s + j_{sa} \quad 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} \quad {}^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad {}^{ik} + 1 = \quad \boldsymbol{sa} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$\quad {}^{i} \quad 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_i}} \sum^{(\boldsymbol{l_s}-k+1)}_{-D-s+1)}
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}} \sum^{(}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}} \sum^{n}_{} \sum^{(n_i-j_s+1)}_{-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+} \sum^{(\ )}_{-j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_{i} - j_{ik} + j_{sa}^{is} + j_{s} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \quad - I)! \cdot \left(\boldsymbol{n} + \quad + j_{sa}^{ik} + j_{sa} - j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge$

$\quad \le j_s \le \quad - j_{sa}^{ik} + 1 \wedge \quad + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D \ge \boldsymbol{n} \quad n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{sa}}+1}^{(\boldsymbol{l}_i-k-s+2)} \sum_{(D-j_{sa}+1)} \sum_{j_{ik}=j_s+\boldsymbol{l_s}}^{(} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}}^{)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i - j_{ik} + j_{sa}^{is} + j_s - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa}^{ik} - j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\le j_s \le j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \boldsymbol{l_{sa}} = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-j_{sa}+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)} \sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}-1}^{(} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_i}+1)}^{(} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}}^{(} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(} \frac{\left(n_{sa} - 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - j_s - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!} $$

$D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{sa} - j_{sa}^{ik} + 1 \wedge j_{sa}^{s} + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} - j_{sa}^{s} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \boldsymbol{n} = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D > \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(\boldsymbol{l_s}+1)}^{} \sum_{\boldsymbol{l_{sa}}+\boldsymbol{n}-\boldsymbol{l_i}+j_{sa}+1)}^{}
$$

$$
\sum_{=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{} \sum_{(=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{}
$$

$$
\sum_{}^{} \sum_{(j_s+1)}^{}
$$

$$
\sum_{+\mathbb{k}\,(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{}
$$

$$
\sum_{n_{ik}=n_{is}+}^{} \sum_{j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{( )}
$$

$$
\frac{(+2\cdot j_{ik}+j_{sa}^{s}\ j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I)!}{(n_i-\boldsymbol{n}-\cdot(\boldsymbol{n}+2\cdot j+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik})!}\cdot
$$

$$
\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

$\geq \boldsymbol{n} < \wedge \boldsymbol{l_s} > D - + 1 \wedge$

$2 \leq j \leq j_{ik} - \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - ^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$- j_{sa}^{ik} = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(\boldsymbol{l_i}-\boldsymbol{l_{ik}}-\boldsymbol{l_s}+2)}^{(\boldsymbol{l_i}-\boldsymbol{l_{ik}}-\boldsymbol{l_s}+2)} \sum_{(\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j_{sa}^{ik}+1)}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\boldsymbol{l_{ik}}-\boldsymbol{l_s})} \sum_{j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}}}^{(j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1}^{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}-j_{ik}}^{(n_{ik}=n_{is}-j_{ik})} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - \mathbb{k} - (\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_{ik} \leq j_{ik} - j_{sa} \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$j^{sa} - j_{sa}^{ik} = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=\cdots}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-\cdots+1)}^{(\boldsymbol{l_{sa}}-k-\cdots+2)} \sum_{j_{ik}=\cdots+\boldsymbol{l_{ik}}-\boldsymbol{l_s}(\cdots)}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(\ )} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + \cdots + j_{sa}^{ik} + j_{sa}^{s} + \cdots - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{\cdots - \boldsymbol{n} - I)! \cdot (\cdots + 2 \cdots + j_{sa}^{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \cdots < n \wedge \boldsymbol{l_s} \cdots \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{\cdots} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\cdots + j_{\cdots} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_s}} \sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}}^{} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + \cdots + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \cdots - I)! \cdot \left(\cdots + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < \cdots \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots < j_{sa} \leq \cdots - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fz_{\boldsymbol{ik}} = \sum_{\boldsymbol{l_i}+1}^{} \sum_{(\boldsymbol{l_i}-k-s+2}^{} \sum_{\boldsymbol{l_s}+\boldsymbol{n}-D)}$$

$$\sum_{j_{ik}} \sum_{+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\ )} \sum_{j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{(\quad + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I)!}{\quad - \boldsymbol{n} - (\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz^{\cup_{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}}} = \sum_{j_{ik}=1}^{D} \sum_{(\boldsymbol{l_{sa}}-k-j_{sa}+1 \le j_{ik} \le \boldsymbol{l_{sa}}+\boldsymbol{n}-D)} \sum_{j_{ik}+\boldsymbol{l_{ik}}-\boldsymbol{l_s} \cup^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I)!}{\boldsymbol{n} - \boldsymbol{n} - (\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D > \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz^{S_{j_s}} \sum_{D=} \sum_{k} \sum_{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+} \sum_{(\boldsymbol{n}-D)}$$

$$\sum_{j_{ik}} \sum_{+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{\left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$(D > \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_{sa}}-k+1)}$$

$$\sum_{n_i = \boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i - j_s+1)}$$

$$\sum_{n_{ik} = n_{is}+j_s-j_{ik}} \sum_{(n_{sa} = n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik}=$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big) \wedge$

$$fz S_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + 2\cdot j_{ik} + j^{s}_{sa} + j_{sa} - j_s - j^{sa} - s - 2\cdot j^{ik}_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)!\cdot\left(\boldsymbol{n} + 2\cdot j_{ik} + j^{s}_{sa} + j_{sa} - j_s - j^{sa} - s - 2\cdot j^{ik}_{sa}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)!\cdot(j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})!\cdot(\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n}\big) \wedge$

$\big(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+j^{ik}_{sa}-j_{sa}} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j^{ik}_{sa}+1)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{\left(n_i+2\cdot j_{ik}+j^{s}_{sa}+j_{sa}-j_{s}-s-2\cdot j^{ik}_{sa}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j^{s}_{sa}+j_{sa}-j_s-j_{ik}-2\cdot j^{ik}_{sa}\right)!}\cdot
$$

$$
\frac{-k-1)!}{-j_s-+1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(-\boldsymbol{l_i})!}{(D+-\boldsymbol{n}-\boldsymbol{l}-1)!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

$\big((D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\boldsymbol{n}-1\wedge$

$2\leq j_s\leq j_{ik}-j^{ik}_{sa}+1\wedge j_s+j^{ik}_{sa}-1\leq j_{ik}\leq j^{sa}+j^{ik}_{sa}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j^{ik}_{sa}\leq j^{sa}+\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j^{ik}_{sa}+1=\wedge\boldsymbol{l_{sa}}+j^{ik}-j_{sa}\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}})\vee$

$(D\geq <n\wedge\boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j-j^{ik}_{sa}+1\wedge j_s+j^{ik}_{sa}-1\leq j_{ik}\leq j^{sa}+j^{ik}_{sa}-j_{sa}\wedge$

$j_{ik}+-j^{ik}_{sa}\leq\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j^{ik}_{sa}+=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j^{ik}_{sa}-j_{sa}>\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}\wedge$

$+s-<\boldsymbol{l_i}\leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)\big)\wedge$

$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j^{i}_{sa}-1\wedge j^{ik}_{sa}=j_{sa}-1\wedge j^{s}_{sa}\leq j^{ik}_{sa}-1\wedge$

$\boldsymbol{s}\colon\{j^{s}_{sa},\cdots,j^{ik}_{sa},j_{sa},\cdots,j^{i}_{sa}\}\wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} \quad \boldsymbol{l_{ik}})}
$$

$$
\sum_{(\quad j_{sa}-k-j_{sa}^{ik}+1)}
$$

$$
\sum_{j_{ik}=j^{sa}+\quad -j_{sa}\ (j^{\quad} \quad -D-s)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ \ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + 2 \quad + j_{sa}^{s} + \quad_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{\quad - \boldsymbol{n} - I)! \cdot (\quad 2 \quad_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \quad < n \wedge \boldsymbol{l_s} \quad - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i} \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{sa} \quad j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\cdots s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})} \sum_{(\boldsymbol{l_s}\cdots-k)} \sum_{j_{\cdots}{}^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l}_{\cdots}{}^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} \cdots + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i \cdots - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < \cdots \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots \leq j_s \leq \cdots - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\cdots s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})} \sum_{(\boldsymbol{l_s}\cdots-k)} \sum_{j_{ik}\cdots_{sa}+j_{sa}^{ik}-j_{s}\cdots j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} \cdots + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i \cdots - I)! \cdot \left(\cdots + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < \cdots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots j_{ik} \cdots - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

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$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$)_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s+\mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$\mathcal{B}_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_s}+j_{sa}-k)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}\big)!}\cdot$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D+s-\boldsymbol{n} < \boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1) \vee$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}$ $\wedge j_{sa}^{s} \leq j_{sa}^{ik}$ $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge$ $= \mathbb{k} >$ $\wedge$

j_{sa} $j_{sa}^{i}-1 \wedge j_{sa}^{ik}$ $j_{sa}-1 \wedge$ $\leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s$ $\wedge$

$\mathbb{k}_z, z = 1)$ $\Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ \ )}$$

$$\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_s}+j_{sa}-k)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + 2\cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2\cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)!\cdot\left(\boldsymbol{n} + 2\cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - \quad - 2\cdot j_{sa}^{ik}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1}{(\boldsymbol{l_s} - j_s - k \quad)!\cdot(\quad - 2)!}\cdot$$

$$\frac{(D - \boldsymbol{l_i})}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l} - j_{sa})!\cdot(\boldsymbol{n} \quad j_{sa} - j^{sa} - \quad}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + \quad - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - \quad = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} \quad j_{sa} - s > \quad) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} \quad 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} \quad 1 \leq j_{ik} \leq \quad ^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j \quad \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l} \quad - j_{sa}^{ik} + 1 \quad \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \quad _{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + \quad s - \boldsymbol{n} < \boldsymbol{l_i} \leq \quad + \boldsymbol{l_s} + s \quad - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \quad _{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, \quad ^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} \quad s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ \ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j^{ik}_{sa}-D-s}^{\boldsymbol{l_{sa}}+j^{ik}_{sa}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}}}^{(\ \ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(\ \ \ \ j_s+1)}^{(\ \ \ \ j_s+1)}
$$

$$
\sum_{n_{ik}=\ \ \ \ \ \ \ \ }^{\ \ \ \ \ \ \ \ } \sum_{(n_{sa}=\ \ \ \ \ \ \ \ j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}
$$

$$
\frac{\left(n_i + 2\cdot j_{i\ \ \ \ } + j^{s}_{sa} + j_{sa\ \ \ \ } - j_s - j^{\ \ \ \ } - s - 2\cdot j_{sa\ \ \ \ }\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2\cdot j_{ik} + j_{sa\ \ \ \ } - j_{sa} - j_{s\ \ \ \ } - j^{sa} - s - 2\cdot j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D + \boldsymbol{l_i})!}{(D + j^{sa} + \ \ \ \ - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \ \ \wedge j_s + j^{ik}_{sa} - 1 \leq \ \ \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \ \ \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \ \ + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \ \ \wedge \boldsymbol{l_s} \leq D - \ \ + 1 \wedge$

$1 \leq \ \ \leq j_{ik} - j_{sa} \ \ \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \ \ \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\ \ \ \ - 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\cdots+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{\cdots} \cdots + \boldsymbol{n} + j_{sa}^{ik} \cdots s} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} \cdots + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i \cdots - I)! \cdot \left(\cdots + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$((D \geq \boldsymbol{n} < \cdots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots j_{\cdots} \cdots_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

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$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$)_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+s-\boldsymbol{n} < \boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik} =$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{s}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, \cdots, j_{sa}^{i}\} \wedge$

$s >$ [illegible] $\boldsymbol{s} = s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big) \wedge$

$$fz S_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j^{s}_{sa}+j_{sa}-j_s-j^{sa}-s-2\cdot j^{ik}_{sa}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j^{s}_{sa}+j_{sa}-j_s-j^{sa}-s-2\cdot j^{ik}_{sa}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j^{ik}_{sa}+1\wedge j_s+j^{ik}_{sa}-1\leq j_{ik}\leq j^{sa}+j^{ik}_{sa}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j^{ik}_{sa}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j^{ik}_{sa}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j^{ik}_{sa}-j_{sa}=\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}\wedge$

$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j^{i}_{sa}-1\wedge j^{ik}_{sa}=j_{sa}-1\wedge j^{s}_{sa}\leq j^{ik}_{sa}-1\wedge$

$\boldsymbol{s}:\{j^{s}_{sa},\cdots,j^{ik}_{sa},j_{sa},\cdots,j^{i}_{sa}\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j^{i}_{sa}-1\wedge j^{ik}_{sa}=j_{sa}-1\wedge j^{s}_{sa}\leq j^{ik}_{sa}-1\wedge$

$\boldsymbol{s}:\{j^{s}_{sa},\cdots,j^{ik}_{sa},\mathbb{k},j_{sa},\cdots,j^{i}_{sa}\}\wedge$

$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$

$\mathbb{k}_z:z=1)\big)$

$$fzS^{DSD}_{j_s,j_{ik},j^{sa}}=\sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}}\ \sum^{(\ )}_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j^{ik}_{sa}-D-s}^{\boldsymbol{l_s}+j^{ik}_{sa}-k}\ \sum^{(\ )}_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - \quad - 2 \cdot j_{sa}^{ik}\right)} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1}{(\boldsymbol{l_s} - j_s - k \quad)! \cdot (\quad - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_s} - j_{sa})! \cdot (\boldsymbol{n} \quad j_{sa} - j^{sa} - \quad}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} \quad _{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j \quad > \boldsymbol{l_{ik}} \wedge \boldsymbol{l} \quad j_{sa} - s = \quad \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge \quad _{sa} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \quad j_{sa}^{i}\right\} \wedge$

$s \quad 3 \wedge \boldsymbol{s} = \quad \wedge$

$(D \quad \boldsymbol{n} < n \wedge I = \quad > 0 \wedge$

$j_{sa} \leq j_{sa} \quad 1 \wedge j_{sa}^{ik} = j_{s} \quad 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{i} \quad j_{sa}\right\} \wedge$

$s \quad 4 \wedge \quad s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1) \quad \Rightarrow$

$$_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{\left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+\quad -j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-\quad -j_{sa}^{ik}-\quad\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-\quad -j^{sa}-s-\quad -j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}\quad -1)!}{\quad k+\quad !\cdot(j_s-2)!}\cdot$$

$$\frac{(\quad -\boldsymbol{l_i})!}{(D+j^{sa}-\quad -\boldsymbol{l_{sa}})!\quad +\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+\quad -j_{ik}\leq j\quad +j_{sa}^{ik}-j\quad \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}\quad -s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-\quad >\boldsymbol{l_{ik}}\wedge \boldsymbol{l}\quad j_{sa}-s>\boldsymbol{l_{sa}}\big)\vee$

$(D\geq \quad <n\wedge \boldsymbol{l_s}\leq \quad -\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-\quad +1\wedge j\quad +j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}\quad -j_{sa}^{ik}\leq j^{s}\quad \boldsymbol{n}+j_{sa}\quad s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}\quad =\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}\quad j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge$

$D+s\quad \boldsymbol{n}<\boldsymbol{l_i}\quad \boldsymbol{l_s}+s-\boldsymbol{n}-1)\big)\wedge$

$\big((D\geq \boldsymbol{n}<\quad \wedge I=\mathbb{k}=0\wedge$

$<j^{i}\quad 1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge \boldsymbol{s}=s)\vee$

$(D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\cdots+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-\cdots}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-\cdots)}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}\,(n_{is}=\cdots-j_s+1)}^{n} \sum^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+\cdots j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_{\cdots}-2\cdot j_{ik}-\cdots+j_{sa}^{s}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\right)!}{(n_i-\cdots-I)!\cdot\left(\boldsymbol{n}+2\cdot\cdots+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}\right)!}\cdot
$$

$$
\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(D-\boldsymbol{l_i})!}{(D-\cdots-j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}
$$

$D \ge \cdots < n \wedge \boldsymbol{l_s} > D - \cdots \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{\cdots} - j_{sa}^{ik} + 1 \wedge \cdots + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \cdots - j_{sa}^{ik} \le j^{\cdots} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \cdots > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D > \cdots < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} \sum_{(j_s = j_{ik}^{ik}_{sa}+1)}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{j_{ik}^{} \sum_{ik}^{\boldsymbol{l_s}+j_{sa}^{ik}-D-s} \sum_{(}^{(\ )} \sum_{j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{} \sum_{+1)}^{} \sum_{n_i=}^{n} \sum_{\mathbb{k}\,(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{} \sum_{=n_{}}^{(\ )} \sum_{-j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{}
$$

$$
\frac{\left(n_{} - 2 \cdot j_{ik} + j_{sa}^{s} \; _{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - 1) \; \left(\boldsymbol{n} + 2 \cdot j_{} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$((D \geq \boldsymbol{n} < \; \wedge \boldsymbol{l_s} > D \; \boldsymbol{n} + 1 \wedge$

$2 \leq \; j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \; \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\; 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-1} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )} \sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s +$

$\mathbb{k} \ge z = 1))$

$$fz S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

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$$\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_s} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s \geq 3 \wedge \boldsymbol{s} = \vee$

$(D \geq \boldsymbol{n} < n \wedge I = > 0 \wedge$

$j_{sa} \leq j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}, j_{sa}, \cdots, j_{sa}\} \wedge$

$s \geq \wedge = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D + \boldsymbol{l_s} + s - \boldsymbol{n} - \boldsymbol{l_i}} \sum_{(j_s = \boldsymbol{l_i} + \boldsymbol{n} - D - s + 1)}^{(\boldsymbol{l_{ik}} - k - j_{sa}^{ik} + 2)}$$

$$\sum_{j_{ik} = j_s + \boldsymbol{l_{ik}} - \boldsymbol{l_s}} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-\quad-2\cdot j_{sa}^{ik}\right.}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k\quad)!\cdot(\quad-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_s}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$\big((D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}})\vee$

$(D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i}\leq D+\boldsymbol{l_s}+s-(\quad-1)\big)\wedge$

$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j^{ik}_{sa}+2)}
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\quad)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}(\quad)+\mathbb{k}(j_s+1)}^{n} \sum_{(\quad)}^{(\quad j_s+1)}
$$

$$
\sum_{n_{ik}=\quad+j_s} \sum_{(n_{sa}=n_{\quad}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + 2\cdot j_{ik} + j^{s}_{sa} + j_{sa} - j_s - j^{sa} - s - 2\cdot j^{ik}_{sa}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2\cdot j_{ik} + j^{s}_{sa} + j_{sa} - j_s - j^{sa} - s - 2\cdot j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \leq \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} \leq D - \quad + 1 \wedge$

$1 \leq \quad j_{ik} - j_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}} \sum_{(\boldsymbol{l_{ik}}}^{\boldsymbol{n}-\boldsymbol{l_i}} \sum_{\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}} \sum_{(j_{ik}=j_s+\boldsymbol{l_{ik}}}^{} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + \boldsymbol{l_s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{l_s} - I)! \cdot \left(\boldsymbol{l_s} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$j_{ik} \leq j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz\,S_{j_s, j_{ik}, j^{sa}}^{DSD} \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-} \sum_{D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}} \sum_{+\boldsymbol{l_{ik}}-\boldsymbol{l_s}\ j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{(\quad + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I)!}{\quad - \boldsymbol{n} - \quad (\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$> \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}}^{DSD} \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-} \sum_{D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}+\boldsymbol{l_{ik}}-\boldsymbol{l_s}\ (j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{\left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$(D > \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_{ik}, j^{sa}}^{D} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s+\mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$f_{j_s, j_{ik}, j^{sa}}^{SD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}\big)!}\cdot$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D+s-\boldsymbol{n} < \boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1) \vee$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa} \wedge j_{sa}^{s} \leq j_{sa}^{ik} \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s \wedge \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-\quad-2\cdot j_{sa}^{ik}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k\quad)!\cdot(\quad-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}_{\boldsymbol{s}}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-}$$

$$\big((D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$$

$$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$$

$$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$$

$$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\quad)\vee$$

$$(D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$$

$$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$$

$$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$$

$$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$$

$$D+j_{sa}-\boldsymbol{n}<\boldsymbol{l_{sa}}<D+\boldsymbol{l_s}-\boldsymbol{n}-1)\big)\wedge$$

$$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$$

$$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$$

$$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\right\}\wedge$$

$$s>3\wedge\boldsymbol{s}=s)\vee$$

$$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$$

$$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$$

$$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\right\}\wedge$$

$$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+j^{ik}_{sa}-j_{sa}}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j^{ik}_{sa}+1)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(\ \ j_s+1)}^{(\ \ j_s+1)}
$$

$$
\sum_{n_{ik}} \sum_{(n_{sa}=\ \ j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + 2\cdot j_{i} + j^{s}_{sa} + j_{sa} \quad j_s - j^{\ \ } \quad s - 2\cdot j_{sa}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + 2\cdot j_{ik} + j^{s}_{sa} \quad j_{sa} - j_s \quad j^{sa} - s - 2\cdot j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D \quad j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \leq \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad \leq j^{sa} \leq \boldsymbol{n} \quad _{sa} - s \wedge$

$\boldsymbol{l_{ik}} \quad ^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l} \quad + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} \leq D - \quad + 1 \wedge$

$1 \leq \quad \wedge j_{ik} - j_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad ^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+\cdots-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})} \cdots
$$

$$
\sum_{j_{\cdots}^{sa}+j_{sa}^{ik}-\cdots} \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D)} \cdots
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \cdots
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \cdots
$$

$$
\frac{\left(n_i + 2 \cdot j_{ik} + \cdots + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(n_i - \cdots - I)! \cdot \left(\cdots + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < \cdots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

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$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fz^{\boldsymbol{s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}}_{\boldsymbol{s}\,D}{}_{j_{ik},j^{sa}} = \sum_{k=1}^{(\ )} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(\boldsymbol{l_s} + j_{sa} - k)} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+j_{sa}-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik} =$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k},$ [illegible] $\cdots, j_{sa}^{i}$ [illegible]

$s >$ [illegible] $\boldsymbol{s} = s+\mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)$ [illegible]

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )} \sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + 2\cdot j_{ik} + j^s_{sa} + j_{sa} - j_s - j^{sa} - s - 2\cdot j^{ik}_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)!\cdot\left(\boldsymbol{n} + 2\cdot j_{ik} + j^s_{sa} + j_{sa} - j_s - j^{sa} - s - 2\cdot j^{ik}_{sa}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)!\cdot(j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})!\cdot(\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - 1) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+j^{ik}_{sa}-j_{sa}} \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D)}^{(\boldsymbol{l_s}+j_{sa}-k)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(\ )=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{\left(n_i+2\cdot j_{ik}+j^s_{sa}+j_{sa}-\right.\ \left.-s-2\cdot j^{ik}_{sa}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+\ \cdot j_{ik}+j^s_{sa}+j_{s}-j_s-\ -2\cdot j^{ik}_{sa}\right)!}\cdot
$$

$$
\frac{(\boldsymbol{l_s}-k-1)!}{(\ -j_s-\ +1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(\ -\boldsymbol{l_i})!}{(D+\ -\boldsymbol{n}-\boldsymbol{l}\ )!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

$$
\left((D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\ +1\wedge\right.
$$

$$
2\leq j_s\leq j_{ik}-j^{ik}_{sa}+1\wedge j_s+j^{ik}_{sa}-1\leq j_{ik}\leq j^{sa}+j^{ik}_{sa}-j_{sa}\wedge
$$

$$
j_{ik}+\ -j^{ik}_{sa}\leq j^{sa}+\boldsymbol{n}+j_{sa}-s\wedge
$$

$$
\boldsymbol{l_{ik}}-j^{ik}_{sa}+1>\ \wedge \boldsymbol{l_{sa}}+\ -j_{sa}=\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}})\vee
$$

$$
(D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge
$$

$$
2\leq j_s\leq j_{ik}-j^{ik}_{sa}+1\wedge j_s+j^{ik}_{sa}-1\leq j_{ik}\leq j^{sa}+j^{ik}_{sa}-j_{sa}\wedge
$$

$$
j_{ik}+\ -j^{ik}_{sa}\leq j^{sa}+\boldsymbol{n}+j_{sa}-s\wedge
$$

$$
\boldsymbol{l_{ik}}-j^{ik}_{sa}+\ >\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j^{ik}_{sa}-j_{sa}=\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge
$$

$$
+j_{sa}\ <\boldsymbol{l_{sa}}\leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)\big)\wedge
$$

$$
\left((D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge\right.
$$

$$
j_{sa}\leq j^{i}_{sa}-1\wedge j^{ik}_{sa}=j_{sa}-1\wedge j^{s}_{sa}\leq j^{ik}_{sa}-1\wedge
$$

$$
\boldsymbol{s}\colon\left\{j^{s}_{sa},\cdots,j^{ik}_{sa},j_{sa},\cdots,j^{i}_{sa}\right\}\wedge
$$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{} \sum_{(j_s = j_{ik} - \cdots + 1)} \sum_{} \sum_{} \sum_{n_i = \boldsymbol{n} + \mathbb{k}} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)} \sum_{} \sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\left(n_i + \cdots + j_{sa}^{ik} + j_{sa}^{s} + \cdots - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{\cdots - \boldsymbol{n} - I)! \cdot (\cdots + 2 \cdots + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \cdots \boldsymbol{n} < n \wedge \cdots - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\cdots + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$S_{j_s, j_{ik}, \ldots}^{DSI} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s - \mathbb{k} \wedge$

$\mathbb{k}_z \vdots = 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} $$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\vee$

$(D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$D+j_{sa}-\boldsymbol{n}<\boldsymbol{l_{sa}}\leq D+\boldsymbol{l_s}+j_{sa}-1)\wedge$

$\big((D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge \boldsymbol{s}=s+\mathbb{k}\wedge$

$(D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge \boldsymbol{s}=s+\mathbb{k}\wedge$

$\mathbb{k}_z:z=1)\big)\Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j^{ik}_{sa}-D-s}^{\boldsymbol{l_s}+j^{ik}_{sa}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=n_i-\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{\left(n_i+2\cdot j_{ik}+j^s_{sa}+j_{sa}-j_{s}-s-2\cdot j^{ik}_{sa}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j^s_{sa}+j_{sa}-j_s-j_{ik}-2\cdot j^{ik}_{sa}\right)!}\cdot
$$

$$
\frac{k-k-1)!}{-j_s-+1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(-\boldsymbol{l_i})!}{(D+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\boldsymbol{l_i} + j_{sa} - s < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{\boldsymbol{n}=D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}}^{(\quad)} \sum_{(j_s=j_{ik}\quad+1)}^{(\quad)}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\quad+j_{sa}^{ik}-k}^{(\quad)} \sum_{\quad-D-s\,(\quad-\boldsymbol{l_{ik}})}^{(\quad)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + 2\quad + j_{sa}^{s} + \quad_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{-\boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} \quad 2\quad_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \quad < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i} \quad j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, \ldots}^{DSI} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{} \frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{s} \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = \mathbb{k} \wedge$

$\mathbb{k}_z = 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )} \sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j_{sa}^{ik} - D - j_{sa}}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} $$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + 2\cdot j_{ik} + j^s_{sa} + j_{sa} - j_s - j^{sa} - s - 2\cdot j^{ik}_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)!\cdot\left(\boldsymbol{n} + 2\cdot j_{ik} + j^s_{sa} + j_{sa} - j_s - j^{sa} - s - 2\cdot j^{ik}_{sa}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)!\cdot(j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})!\cdot(\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - 1) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}}^{(\quad)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\quad)}
$$

$$
\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-\quad-s-2\cdot\quad-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_s-j_s-\quad-2\cdot j_{sa}^{ik}\right)!}\cdot
$$

$$
\frac{-k-1)!}{-j_s-\quad+1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(\quad-\boldsymbol{l_i})!}{(D+\quad-\boldsymbol{n}-\boldsymbol{l}\quad)!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

$\big((D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\boldsymbol{n}\quad 1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}\quad 1\leq j_{ik}\leq \quad a}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-\quad{}^{ik}\leq j^{sa}\quad \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\quad\wedge \boldsymbol{l_{sa}}+\quad-j_{sa}\quad \boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}})\vee$

$(D\geq\quad<n\wedge \boldsymbol{l_s}\leq D\quad \boldsymbol{n}+1\wedge$

$1\leq j_s\leq j\quad-j_{sa}^{ik}+1\wedge\quad_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+\quad-j_{sa}^{ik}\leq j\quad\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+\quad=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$\quad i\quad<\boldsymbol{l_{sa}}\leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)\big)\wedge$

$\big((D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-}^{(\boldsymbol{l_{ik}}-k-} \sum_{j_{ik}=}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )}
$$

$$
\frac{\left(n_i + 2 \cdot j_{sa}^{s} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{(\boldsymbol{n} - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} - 2 \cdot j_{sa}^{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \quad < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i} \quad j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$\sum_{k=1}^{D+\boldsymbol{l_s}+\cdots-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum^{(\ )}_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{s} \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = \mathbb{k} \wedge$

$\mathbb{k}_z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_s-j^{sa}-s-2\cdot j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\vee$

$(D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$D+j_{sa}-\boldsymbol{n}<\boldsymbol{l_{sa}}\leq D+\boldsymbol{l_s}+j_{sa}-1)\wedge$

$\big((D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge \boldsymbol{s}=s+\mathbb{k}\wedge$

$(D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge \boldsymbol{s}=s+\mathbb{k}\wedge$

$\mathbb{k}_z:z=1)\big)\Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\ \ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\ \ \mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ \ )}
$$

$$
\frac{\left(n_i+2\cdot j_{ik}+j^s_{sa}+j_{sa}-\ \ -s-2\ \ -I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+\ \ j_{ik}+j^s_{sa}+j\ \ -j_s-\ \ \ \ 2\cdot j^{ik}_{sa}\right)!}\cdot
$$

$$
\frac{\boldsymbol{l_s}-k-1)!}{\ \ -j_s-\ \ +1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(\ \ -\boldsymbol{l_i})!}{(D+j\ \ -\boldsymbol{n}-\boldsymbol{l}\ \ )!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D -\ \ 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \ \ 1 \leq j_{ik} \leq \ \ ^{a} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \ \ - j^{ik}_{sa} \leq j^{s} \ \ \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \ \ \wedge \boldsymbol{l_{sa}} + \ \ ^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq \ \ - \boldsymbol{n} + 1$

$1 \leq j_s \leq \ \ - j^{ik}_{sa} + 1 \wedge \ \ _s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \ \ - j^{ik}_{sa} \ \ \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \ \ > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\ \ + j_{sa} \ \ < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\quad)} \sum_{(\quad=\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{\quad} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + \Delta_{ik} + j_{sa}^{s} + \quad_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\right)!}{\quad_i - \boldsymbol{n} - I)! \cdot (\quad + 2 \quad_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D > \boldsymbol{n} < n \wedge \quad - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$\sum_{j_s, j_{ik}, J}^{DSD} \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}^{(\boldsymbol{l_s} + j_{sa} - k)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + 2 \cdot j_{ik} + j_{sa}^{s} + j_{sa} - j_s - j^{sa} - s - 2 \cdot j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge$ $\leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{s}^{s}$ $\cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}$ $, j_{sa}^{i}\} \wedge$

s $4 \wedge \boldsymbol{s} = s$ $\mathbb{k} \wedge$

$\mathbb{k}_z$ $= 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )} $$

$$ \sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )} $$

$$ \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} $$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + 2\cdot j_{ik} + j^s_{sa} + j_{sa} - j_s - j^{sa} - s - 2\cdot j^{ik}_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)!\cdot\left(\boldsymbol{n} + 2\cdot j_{ik} + j^s_{sa} + j_{sa} - j_s - j^{sa} - s - 2\cdot j^{ik}_{sa}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)!\cdot(j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})!\cdot(\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j^{ik}_{sa} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j^{ik}_{sa} - 1\big) \wedge$

$\big(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s)$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l}}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{\left(n_i+2\cdot j_{ik}+j_{sa}^{s}+j_{sa}-j_{s}-2\cdot j_{ik}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+2\cdot j_{ik}+j_{sa}^{s}+j_{s}-j_s-j_{ik}-2\cdot j_{sa}^{ik}\right)!}\cdot
$$

$$
\frac{-k-1)!}{-j_s-+1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(-\boldsymbol{l_i})!}{(D+j_{sa}-\boldsymbol{n}-\boldsymbol{l}_{sa})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$\boldsymbol{l_{sa}} > D + \boldsymbol{l_{ik}} + j_{sa} - \boldsymbol{n} - j_{sa}^{ik} \wedge \boldsymbol{l_i} > D + \boldsymbol{l_{sa}} + s - \boldsymbol{n} - j_{sa}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$\boldsymbol{l_{ik}} > D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1 \wedge \boldsymbol{l_i} > D + \boldsymbol{l_{sa}} + s - \boldsymbol{n} - j_{sa}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa} + 1 > \boldsymbol{l_s} \wedge$

$\boldsymbol{l_{sa}} > D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1 \wedge \boldsymbol{l_i} > D + \boldsymbol{l_{sa}} + s - \boldsymbol{n} - j_{sa}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_i} > D + \boldsymbol{l_s} + s - \boldsymbol{n} - j_{sa}) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > s \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$ {}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = 0$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s} : \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s} : \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$ {}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j^{ik}_{sa} + 1)}^{(\ )} \sum_{j_{ik} = j^{sa} + j^{ik}_{sa} - j_{sa}}^{(\boldsymbol{l_i} + j_{sa} - k - s + 1)} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

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$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}^{(\boldsymbol{l_{sa}} - k + 1)} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\right\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\right\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\left.\mathbb{k}_z: z=1)\right) \wedge$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=\boldsymbol{l_{ik}}+\boldsymbol{n}+j_{sa}-D-j_{sa}^{ik})}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j_{sa}^{ik}+1)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1}{(\boldsymbol{l_s} - j_s - k)! \cdot (\quad - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l} - j_{sa})! \cdot (\boldsymbol{n} - j_{sa} - j^{sa} -}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j$

$\left((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0\right.$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \quad j_{sa}^{i}\right\} \wedge$

$s \quad 3 \wedge \boldsymbol{s} =$

$(D \quad \boldsymbol{n} < n \wedge I =$

$j_{sa} \leq j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \quad j_{sa}\right\} \wedge$

$s \quad 4 \wedge \quad s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1) \Rightarrow$

$$_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

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$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}-D-1)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_{s}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+}^{(\ )} -j^{sa}-\mathbb{k})$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}-j_{sa}-j^{sa}-\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{-k+\ !\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\ )!}{(D+j^{sa}+s-\boldsymbol{n}-\ -j_{sa})!\,(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j^{ik}- \leq j_{ik} \leq +j_{sa}^{ik}-j \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}-j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}- =\boldsymbol{l_{ik}} \wedge \boldsymbol{l}- j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I \leq =0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge =j_{sa}-1 \wedge j_{sa}^{s} \leq ^{ik}-1 \wedge$

$\boldsymbol{s}: \{ \cdots, j_{sa}^{ik}, j_{sa}, \cdots \} \wedge$

$>3 \wedge \ s) \vee$

$(D \geq < n \wedge \ 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\{j_{sa}^{s}, \cdots \}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}-j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+j^{ik}_{sa}-j_{sa}} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-}^{(\boldsymbol{l_{sa}}-k+1)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\ \mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + \ ^{sa} - s - \ - j^{ik}_{sa}\right)!}{(n_i - \boldsymbol{n} -)! \cdot \left(\boldsymbol{n} + \ + j_{sa} \ ^{sa} - \ - j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{\ - k - 1)!}{- j_s - \ + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \ )!}{(D \ ^{a} + s - \ - \boldsymbol{l_i} - \ )! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} \ \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \ 1 \leq j_{ik} \leq \ ^{a} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \ - j^{ik}_{sa} \leq j^{s} \ \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \ \wedge \boldsymbol{l_{sa}} + \ ^{ik} - j_{sa} \ \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\left((D \ \boldsymbol{n} < n \wedge I = \ = 0 \wedge\right.$

$j_{sa} \leq j^{i}_{sa} \ 1 \wedge j^{ik}_{sa} = j_{s} \ 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \ , j^{ik}_{sa}, j_{sa}, \ , j_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = \ ) \vee$

$\ > \boldsymbol{n} \ n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik} = j^{sa} + j^{ik}_{sa} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j^{ik}_{sa} + 1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum^{(n_i - j_s + 1)}
$$

$$
n_{ik} + j_s \sum^{(\ )} (n_{sa} = n_i - j_{ik} - j^{sa} - \mathbb{k})
$$

$$
\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa})!}{(n_i - \boldsymbol{n} - I)! \cdot (n_i + j_{ik} + j_{sa} - j^{sa} - s - j^{ik}_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\boldsymbol{l_i})!}{(D + j^{sa} + \boldsymbol{n} - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \cdots j_s + j^{ik}_{sa} - 1 \leq \cdots \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq \cdots \leq \boldsymbol{n} \cdots - s$

$\boldsymbol{l_{ik}} - \cdots + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_i} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < \cdots \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \cdots - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j \cdots j_{sa}, \cdots, j^i_{sa}\} \wedge$

$\cdots = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j^{ik}_{sa} + 1)}^{(\quad)}
$$

$$
\sum_{j_{ik} = j^{sa} + j^{ik}_{sa} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n}_{sa} - D - s)}^{(\boldsymbol{l_s} + j_{sa} - k)}
$$

$$
n_i \sum_{\mathbb{k}} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s)}^{(n_i - 1)}
$$

$$
\sum_{j_{ik} = n_{is} + j_{ik}} \sum_{(n_{sa} = n_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + j_{ik} + \boldsymbol{n} - j^{sa} - I - j^{ik}_{sa}\right)!}{(n_i + \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{sa} - j^{sa} - s - j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\quad - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(\quad + j^{sa} + s + \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s - j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \boldsymbol{n} - j^{ik}_{sa} \leq j^{sa} + \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \boldsymbol{n} = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} - j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\{s, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} +$$

$$(\boldsymbol{l_i} +$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} -$$

$$(n_i - j_s +$$

$$\sum_{=\boldsymbol{n}+\mathbb{k}}$$

$$\sum_{n_{ik}$$

$$\frac{(\quad + j_{ik} + j_{sa} -$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D +$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s}$

$2 \leq$

$j_{ik} + j_{sa} -$

$\boldsymbol{l_{ik}} -$

$((D \geq \boldsymbol{n} <$

$\wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum^{(\ )} $$

$$ (j_s \sum^{} -j_{sa}^{ik}+1) $$

$$ + j_{sa} - k \sum^{} {}_{sa}^{ik}+1) $$

$$ \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-} \sum^{} (j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}- $$

$$ \sum^{n} \sum^{(n_i - j_s + 1)} $$

$$ \sum_{n_i=\boldsymbol{n}+\mathbb{k}\,(n_{is} \sum^{} - j_s+1)} $$

$$ \sum_{n_{ik}=n_{is}+ \sum^{} j_{ik}} \sum^{(\ )} $$

$$ (n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}) $$

$$ \frac{(n_i + j \sum^{} j^{sa} - s - I - j_{sa}^{ik})!}{(n_i - \sum^{} I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot $$

$$ \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot $$

$$ \frac{(D - \boldsymbol{l_i})!}{(D \sum^{} j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!} $$

$D \ge \sum^{} < n \wedge \boldsymbol{l_s} > D \sum^{} \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} \sum^{} - j_{sa}^{ik} + 1 \sum^{} + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} \sum^{} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \sum^{} = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\sum^{} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum^{D-\boldsymbol{n}+1} \sum^{(\quad)} \sum_{(j_s = j_{ik} \cdots j_{sa}^{ik}+1)} \sum_{(\boldsymbol{l_s}+j_s \cdots)} \sum_{\cdots + j_{sa}^{ik} - j_{sa} \cdots = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)} \sum_{(\cdots + 1)} \sum^{n} \sum_{n_i \cdots \mathbb{k}\,(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)} \sum^{(\quad)} \sum_{\cdots - j_{ik}\,(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\left(\cdots + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} \cdots I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < \cdots \boldsymbol{l_s} > D - \cdots + 1 \wedge$

$2 \leq \cdots < j_{ik} - j_{sa} \cdots \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \cdots \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\cdots^{ik} \cdots 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa} + k + s - 1)}^{(\boldsymbol{l}_{sa} - k - s + 1)} \sum_{j^{sa} + j_{sa}^{ik} = \boldsymbol{l}_{ik} + j_{sa} - s}^{(j^{sa} = \boldsymbol{l}_{ik} + j_{sa} - s - j_{sa}^{ik})} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1}^{(\quad)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\quad)} \sum_{n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}}^{(\quad)}
$$

$$
\frac{\left(n_{\quad} + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(\quad - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l}_{\boldsymbol{s}} - k - 1)!}{(\boldsymbol{l}_{\boldsymbol{s}} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l}_{\boldsymbol{i}})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l}_{\boldsymbol{i}} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \quad < n \wedge \boldsymbol{l}_{\boldsymbol{s}} \quad = \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{\quad} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l}_{\boldsymbol{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l}_{\boldsymbol{s}} \wedge \boldsymbol{l}_{\boldsymbol{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l}_{\boldsymbol{ik}} \wedge \boldsymbol{l}_{\boldsymbol{i}} + j_{sa} - s = \boldsymbol{l}_{\boldsymbol{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j^{sa}-j_{sa}+1}^{\boldsymbol{l_{ik}}} \sum_{j_{sa}=\boldsymbol{l_{ik}}+\boldsymbol{n}+j_{sa}-D-j_{sa}^{ik}}^{(\boldsymbol{l_{sa}}-j_{sa}^{ik}+1)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}}^{(\ )}
$$

$$
\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$j_{ik} \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz \sum_{j_s=} \sum_{k=} \sum_{j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}} \sum_{(j^{sa}=\boldsymbol{l_{ik}}+\boldsymbol{n}+j_{sa}-D-j_{sa}^{ik})}^{(\boldsymbol{l_s}+j_{sa}-k)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{\quad} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)}$$

$$\sum_{(\quad = j_{sa} - k - s + 1)}$$

$$\sum_{\quad = j^{sa} + j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s \cdots j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)}
$$

$$
\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(\boldsymbol{l_{sa}} - k + 1)} \sum_{(j^{sa} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik} + 1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$\mathcal{S}_{\dots}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_i} + j_{sa}^{ik} - k - s + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j_{sa}^{ik} - D - j_{sa}}^{\boldsymbol{l_{sa}} + j_{sa}^{ik} - k - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}
\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_{ik}}-k+1}\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)!}\cdot
$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

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$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

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$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

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$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}^{ik}-D-1}^{\boldsymbol{l_s}+j_{sa}^{ik}-k}\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

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$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{sa}} + j_{sa}^{ik} - k - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$\big((D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge \boldsymbol{s}=s)\vee$

$(D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa}^{s}\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge \boldsymbol{s}=s+\mathbb{k}\wedge$

$\mathbb{k}_z:z=1)\big)$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{ik}}-k+1}\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1}{(\boldsymbol{l_s} - j_s - k)! \cdot (\quad - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l} - j_{sa})! \cdot (\boldsymbol{n} - j_{sa} - j^{sa} -}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j$

$\left((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0\right.$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

s

$(D$

j_{sa}

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}\right.$

s

$\mathbb{k}_z: z = 1)$

$$_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

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$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{\left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+\ -j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-\ -j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+\ -j^{sa}-\ -j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}\ -1)!}{k+\ !\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\ )!}{(D+j^{sa}+s-\boldsymbol{n}-\ -j_{sa})!\ \boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+\ \leq j_{ik} \leq\ +j_{sa}^{ik}-j\ \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}\ _{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-\ =\boldsymbol{l_{ik}} \wedge \boldsymbol{l}\ j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\left((D\ \boldsymbol{n} < n \wedge I=\ =0 \wedge\right.$

$j_{sa}^{s} \leq j_{sa}^{i}-1 \wedge\ ^{ik}=j_{sa}\ 1 \wedge j_{sa}^{s} \leq\ ^{ik}-1 \wedge$

$\boldsymbol{s}: \{j\ \cdots, j_{sa}^{ik}, j_{sa}, \cdots\ \} \wedge$

$s>3 \wedge \boldsymbol{s}\ s) \vee$

$(D \geq\ <n \wedge I\ =0 \wedge$

$j_{sa} \leq j_{sa}^{i}\ \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots\ _{sa}^{i}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}-j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j^{ik}_{sa}-D-j_{sa}}^{\boldsymbol{l_i}+j^{ik}_{sa}-k-s+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + \quad - s - \quad - j^{ik}_{sa}\right)!}{(n_i - \boldsymbol{n} - \quad)! \cdot \left(\boldsymbol{n} + \quad + j_{sa} \quad - j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{\quad - k - 1)!}{\quad - j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \quad)!}{(D + \quad + s - \quad - \boldsymbol{l_i} - \quad)! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + \quad \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + \quad - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\left((D \quad \boldsymbol{n} < n \wedge I = \mathbb{k} \quad 0 \wedge\right.$

$j_{sa} \leq j^{i}_{sa} \quad \wedge j^{ik}_{sa} = j_{s} \quad 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \left\{j^{s} \quad j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = \quad) \vee$

$\quad n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \left\{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j^{ik}_{sa}-D-j_{sa}}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa}}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(\quad j_s+1)}^{(\quad j_s+1)}
$$

$$
\sum_{n_{ik}=} \sum_{(n_{sa}=n_i+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i + j_{sa} - j^{sa} - s - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (+ j_{ik} + - j^{sa} - s - j^{ik}_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad \boldsymbol{l_i})!}{(D + j^{sa} + - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \wedge j_s + j^{ik}_{sa} - 1 \leq \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} - j^{sa} \leq \boldsymbol{n} - s$

$\boldsymbol{l_{ik}} - j^{ik} + 1 = \boldsymbol{l_s} \wedge + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq - 1 \wedge j_{sa} - j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$= s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j^{ik}_{sa}-D-j_{sa}}^{\boldsymbol{l_s}+j^{ik}_{sa}-k} \sum^{(\ )} \left(j^{sa} = j_{ik} \ldots {}_{sa} - j^{ik}_{sa}\right)
$$

$$
\sum^{n} \sum^{(n_i - \ldots 1)}
$$

$$
n_i - \ldots \mathbb{k} \left(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s \right.
$$

$$
\sum^{(\ )}
$$

$$
\sum \ldots {}_{ik} = n_{is} + j \ldots {}_{ik} \left(n_{sa} = n_{ik} + j \ldots {}^{sa} - \mathbb{k}\right)
$$

$$
\frac{\left(n_i + j_{ik} + \ldots - j^{sa} \ldots - I - j^{ik}_{sa}\right)!}{(n_i \ldots - I)! \cdot \left(\boldsymbol{n} + \ldots + j_{sa} - j^{sa} - s - j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{\ldots - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(\ldots + j^{sa} + \ldots - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D \ldots \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j \ldots + 1 \wedge j_s \ldots j^{ik}_{sa} - \ldots \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \ldots - j^{ik}_{sa} \leq j^{sa} \ldots \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \ldots = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \ldots j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ldots < n \wedge I \ldots \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - \ldots \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\ldots \left(s \ldots j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} +$$

$$\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_i}+j_{sa}^{ik}-k-s+1} \sum_{(}^{)} \quad (\quad + j_s - j_{sa}^{ik})$$

$$\sum_{\boldsymbol{n}+\mathbb{k}(}^{(n_i - j_s +} \sum_{\boldsymbol{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}=}^{} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{(\quad + j_{ik} + j_{sa} - \quad^{sa} - s - I - j_{sa}^{ik})!}{- \boldsymbol{n} - \quad ! \cdot (\boldsymbol{n} + j \quad + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + \quad - s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} \quad \wedge$

$2 \leq j \quad j_{ik} - j_{sa}^{ik} + \quad j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} \quad + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < \quad \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \quad - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=2}^{(} \sum_{-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-} \sum_{(j^{sa}=j_{ik}+j_{sa}-}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}\,(n_{is}} \sum_{-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+} \sum_{j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(}$$

$$\frac{(n_i + j_{} + j_{} - j^{sa} - s - I - j_{sa}^{ik})!}{(n_i - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{} - j_{sa}^{ik} + 1 \quad j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} \quad - j_{sa}^{ik} \le j^{} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\quad < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{D-\boldsymbol{n}+1} \sum_{(}^{(}$$

$$\sum_{+\boldsymbol{n}-D}^{\boldsymbol{l_s}+j_{sa}} \sum_{(}^{(}$$

$$\sum_{n_i = \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}$$

$$\sum_{= n_{sa} - j_{ik}}^{} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \boldsymbol{n} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$j_{sa}^{ik} - 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - k + 1)}^{(\quad)}
$$

$$
\sum_{\boldsymbol{l_{ik}} = \boldsymbol{l_i} + j_{ik} - k - s + 1}^{(\quad)}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_s} + \boldsymbol{n} + j_{ik} - D - 1 \left(j^{sa} = \boldsymbol{n} + j_{sa} - s - j_{sa}^{ik}\right)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\quad)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\left(n_{\quad} - j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(\quad - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \quad < n \wedge \boldsymbol{l_s} > \quad - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i} \quad + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad \quad j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{\boldsymbol{l_{sa}} + j_{sa} - j_{sa} + 1}
$$

$$
\sum_{j_{ik}=\boldsymbol{n}+j_{sa}^{ik}-D}^{} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik})!}{\quad i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\quad ik - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz \sum_{j_s} \sum_{j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{n}-D-1}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$f_{Z}^{DSD}$$

$$\sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\quad-s+2)}$$

$$\sum_{j_{ik}=}^{\quad} \sum_{j_{sa}^{ik}-1}^{(\quad)} \left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

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$$s > 3 \wedge \boldsymbol{s} = s) \vee$$

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$$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z : z = 1)\big) \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_{ik}} + \boldsymbol{n} - D - j_{sa}^{ik} + 1)}^{(\boldsymbol{l_{ik}} - k - j_{sa}^{ik} + 2)}$$

$$\sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{(\ )} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\ )} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$S_{i\ldots sa}^{DSD\ldots} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_s}+\boldsymbol{n}-D)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

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$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

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$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

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{}_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )}\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
\frac{\big(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\big)!}\cdot
$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

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$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

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$$\sum_{j_{ik} = j_s + j_{sa}^{ik} - 1} \sum_{\left(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}\right)}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

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$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\right\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\right\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\left.\mathbb{k}_z: z=1)\right) \wedge$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}-j_{sa}-s=$

$\left((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s \geq 3 \wedge \boldsymbol{s}=$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}\right\} \wedge$

$s \geq 4 \wedge s \geq s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1) \Rightarrow$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\ \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_s}-k+1)}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{n_{is}=\boldsymbol{n}+\mathbb{k}-j_s}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{n_{sa}=n_{ik}+}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}\right.}\cdot$$

$$\frac{(\boldsymbol{l_s}$$

$$\frac{(D-$$

$$\frac{}{(D+j^{sa}+s-\boldsymbol{n}$$

$$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$$

$$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j^{ik}$$

$$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}$$

$$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}$$

$$\left((D \geq \boldsymbol{n} < n \wedge I=\right.$$

$$j_{sa}^{s} \leq j_{sa}^{i}-1 \wedge$$

$$\boldsymbol{s}: \{$$

$$> 3 \wedge$$

$$(D \geq$$

$$j_{sa}^{s} \leq j_{sa}^{i}$$

$$\{j_{sa}^{s},$$

$$s > 4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$$

$$\left.\mathbb{k}_z: z=1\right) \Rightarrow$$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j^{ik}_{sa}+1)}^{(\boldsymbol{l_i}-k-s+2)}
$$

$$
\sum_{j_{ik}=j_s+j^{ik}_{sa}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=n_i+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + \quad - s - \quad - j^{ik}_{sa}\right)!}{(n_i - \boldsymbol{n} - \quad)! \cdot \left(\boldsymbol{n} + \quad + j_{sa} \quad - j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{\quad - k - 1)!}{- j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \quad)!}{(D + \quad + s - \quad - \boldsymbol{l_i} - \quad)! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + \quad \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{s} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + \quad - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\left((D \quad \boldsymbol{n} < n \wedge I = \quad = 0 \wedge\right.$

$j_{sa} \leq j^{i}_{sa} \quad 1 \wedge j^{ik}_{sa} = j_{s} \quad - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s} \quad , j^{ik}_{sa}, j_{sa}, \quad , j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = \quad) \vee$

$\quad > \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j^{ik}_{sa}+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)}
$$

$$
\sum_{j_{ik}=j_s+j^{ik}_{sa}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa}}^{(\quad)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(\quad+\mathbb{k}-j_s+1)}^{(\quad-j_s+1)}
$$

$$
\sum_{n_{ik}=} \sum_{(n_{sa}=n_i+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{(n_i + j_{sa} - j^{sa} - s - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\quad + j_{ik} + \quad - j^{sa} - s - j^{ik}_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad \boldsymbol{l_i})!}{(D + j^{sa} + \quad - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \leq \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad ^{sa} \leq \boldsymbol{n} \quad _{sa} - s$

$\boldsymbol{l_{ik}} \quad ^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l} \quad + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \quad - 1 \wedge j_{sa} \quad - j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j \quad j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$\quad 2 \quad = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_{ik}} + \boldsymbol{n} - D - j^{ik}_{sa} + 1)}^{(\boldsymbol{l_s} - k + 1)}
$$

$$
\sum_{j_{ik} = j_s + j^{ik}_{sa} - 1}^{(\quad)} \sum_{(j^{sa} = j_{ik} + j_{sa} - j^{ik}_{sa})}
$$

$$
n_i \sum_{\mathbb{k}}^{(n_i - 1)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s)}
$$

$$
\sum_{j_{ik} = n_{is} + j_{ik}}^{(\quad)} \sum_{(n_{sa} = n_{ik} + j_{sa} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - I - j^{ik}_{sa}\right)!}{(n_i - I)! \cdot \left(\boldsymbol{n} + j_{sa} - j^{sa} - s - j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + \boldsymbol{n} - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s - j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} + \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} - j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge\right.$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\{s, \ldots, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_s}+\boldsymbol{n}-1}^{(\boldsymbol{l_i}-k-s+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-} \sum_{j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$(n_i-j_s$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}} \sum_{=\boldsymbol{n}+\mathbb{k}-j_s+1)}$$

$$n_{ik} \sum_{+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{(\quad + j_{ik} + j_{sa} - {}^{sa} - s - I - j_{sa}^{ik})!}{(\quad - \boldsymbol{n} -)! \cdot (\boldsymbol{n} + j_{} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + \quad - s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} \quad {}^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} \quad {}^{ik} + 1 = \quad \boldsymbol{sa} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$\quad < j \quad 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \left(\boldsymbol{l_{sa}} - k - j_{sa}\right) \sum_{(j_s + \boldsymbol{n} - D)}
$$

$$
\sum_{j_{ik} = j_s + j_{sa}} \left(\sum_{\left(j^{sa} = j_{ik} + j_{sa}\right.}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum^{(n_i - j_s + 1)} \left(\right. - j_s + 1)
$$

$$
\sum_{n_{ik} = n_{is} + \left(\right. - j_{ik}} \sum^{(\ )} \left(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}\right)
$$

$$
\frac{\left(n_i + \right. + j_{sa} \left. - sa - s - I - j_{sa}^{ik}\right)!}{\left(n_i - \right. - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{\left(\boldsymbol{l_s} - k - 1\right)!}{\left(\boldsymbol{l_s} - j_s - k + 1\right)! \cdot \left(j_s - 2\right)!} \cdot
$$

$$
\frac{\left(D - \boldsymbol{l_i}\right)!}{\left(D - j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa}\right)! \cdot \left(\boldsymbol{n} + j_{sa} - j^{sa} - s\right)!}
$$

$D \ge \ < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \ = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D > \ n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{(j_s=\boldsymbol{l}_{\boldsymbol{s}}-\boldsymbol{n}-D)}^{D-\boldsymbol{n}+1} \left(\boldsymbol{l}_{\boldsymbol{s}}-k-j_{sa}^{ik}+2\right) \sum_{(j_{ik}=\boldsymbol{l}_{\boldsymbol{ik}}-\boldsymbol{n}-D)}^{(\quad)} $$

$$ \sum_{j^{sa}=\boldsymbol{n}+j_{sa}-s}^{j_{ik}+j_{sa}^{ik}-1} \left(j_{ik}+j_{sa}-j_{sa}^{ik}\right) \sum_{(n_{sa}=\boldsymbol{n}+j_{sa}-j^{sa})}^{(\quad)} $$

$$ \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \left(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1\right) \sum_{(n_{ik}=n_i-\boldsymbol{n}-\mathbb{k}-j_{ik}}^{(\quad)} \left(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}\right) $$

$$ \frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)! \cdot \left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)!} \cdot $$

$$ \frac{(\boldsymbol{l}_{\boldsymbol{s}}-k-1)!}{(\boldsymbol{l}_{\boldsymbol{s}}-j_s-k+1)! \cdot (j_s-2)!} \cdot $$

$$ \frac{(D-\boldsymbol{l}_{\boldsymbol{i}})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}_{\boldsymbol{i}}-j_{sa})! \cdot (\boldsymbol{n}+j_{sa}-j^{sa}-s)!} $$

$((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l}_{\boldsymbol{s}} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$j_{ik} - 1 = \boldsymbol{l}_{\boldsymbol{s}} \wedge \boldsymbol{l}_{\boldsymbol{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l}_{\boldsymbol{ik}} \wedge \boldsymbol{l}_{\boldsymbol{i}} + j_{sa} - s > \boldsymbol{l}_{\boldsymbol{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l}_{\boldsymbol{s}} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(\boldsymbol{l_{sa}} - k + 1)} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{(\ )} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\ )} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz S_{j_s \dots j^{sa}} = \sum^{D+l_s} \sum^{l_i} \sum^{(\ )}_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{(l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1)} \sum_{j^{sa} = l_i + n + j_{sa} - D - s)}$$

$$\sum_{\dots = j^{sa} + \dots - j_{sa}} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}$$

$$\sum_{n_i = n + \mathbb{k}}^{n} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$$

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$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa} + 1 > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}} \sum_{\boldsymbol{l_s}+j_{sa}-k)} \sum_{j_{ik}=j^{sa}+} \sum_{-j_{sa}} \sum_{-D-s)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_{} j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{-I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \quad < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i} \quad j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s,\ldots,sa} = \sum_{k=1}^{D_{\boldsymbol{s}}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{sa}}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} \leq \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} \leq \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

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$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} \sum_{k=1}^{D+\cdots s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{ik}} - k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\cdots s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)} \sum_{\boldsymbol{l_s}\cdots^{ik}-k} \sum_{j_{ik}\cdots \boldsymbol{n}+j_{sa}^{ik}-D\cdots (j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{\cdots_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < \cdots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

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$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fz^{SD}_{j_{ik}, j^{sa}} = \sum_{k=1}^{\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}} \wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fz_{j_{ik}, j^{sa}}^{DSD} = \sum_{=1}^{\boldsymbol{l_{ik}}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa} + 1 > \boldsymbol{l_s} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-} \sum_{D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}+j_{sa}^{ik}-1}^{} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$(D > \quad n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

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$$
\begin{aligned}
&(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge \\
&1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\
&j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge \\
&\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge \\
&D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge \\
&((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge \\
&j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge \\
&\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge \\
&s > 3 \wedge \boldsymbol{s} = s) \vee \\
&(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge \\
&j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge \\
&\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge \\
&s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge \\
&\mathbb{k}_z : z = 1)) \Rightarrow
\end{aligned}
$$

$$
{}_{fz}S^{I}{}_{j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )}
$$

$$
\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik}+1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+j_{sa}-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik}=$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}$ [illegible] $\cdots, j_{sa}^{i}$ [illegible]

$s >$ [illegible] $\boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)$ [illegible]

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}}\ \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j_{sa}^{ik}+1)}\ \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s +$

$\mathbb{k}, z = 1))$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(\boldsymbol{l_s} + j_{sa} - k)} \left(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s\right) \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\ )} \left(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}\right) $$

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$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}^{(\boldsymbol{l_s} + j_{sa} - k)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

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$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s - \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1) \big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k)!\cdot(-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$\big((D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}})\vee$

$(D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$D+j_{sa}-\boldsymbol{n}<\boldsymbol{l_{sa}}<D+\boldsymbol{l_s}-\boldsymbol{n}-1)\big)\wedge$

$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j^{ik}_{sa}-D-j_{sa}}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(\ \ j_s+1)}^{(\ )}
$$

$$
\sum_{n_{ik}=} \sum_{(n_{sa}=n_{ik}-j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i + j_{sa} - sa - s - I)!}{(n_i - \boldsymbol{n} - I)! \cdot + j_{ik} + - j^{sa} - s - j^{ik}_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\ \ \boldsymbol{l_i})!}{(D + j^{sa} + - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l}$ $> D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \ \wedge j_s + j^{ik}_{sa} - 1 \leq \ \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \ ^{sa} \leq \boldsymbol{n}$ $_{sa} - s$

$\boldsymbol{l_{ik}} - \ ^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l}$ $+ j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} <$ $\wedge \boldsymbol{l_s} > D -$ $+ 1 \wedge$

$2 \leq$ $j_{ik} - j_{sa}$ $+ 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} -$ $^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

^{ik} $1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - \boldsymbol{l_{sa}}$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}-j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j^{ik}_{sa}-D-s}^{\boldsymbol{l_s}+j^{ik}_{sa}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(\ =n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{(n_i + j_{ik} + \quad - s - \quad - j^{ik}_{sa})!}{(n_i - \boldsymbol{n} - \quad)! \cdot (\boldsymbol{n} + \quad + j_{sa} \quad - j^{ik}_{sa})!} \cdot
$$

$$
\frac{\quad - k - 1)!}{\quad - j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \quad)!}{(D + \quad + s - \quad - \boldsymbol{l_i} - \quad)! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$$
\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} \quad 1 \wedge
$$

$$
2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad ^{sa} + j^{ik}_{sa} - j_{sa} \wedge
$$

$$
j_{ik} + j_{sa} - \quad ^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} - s \wedge
$$

$$
\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee
$$

$$
(D \geq \quad < n \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge
$$

$$
2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge
$$

$$
j_{ik} + \quad - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge
$$

$$
\boldsymbol{l_{ik}} - j^{ik}_{sa} + \quad > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee
$$

$$
\quad n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge
$$

$$
2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge
$$

$$
j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge
$$

$$
\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee
$$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)$

$\big((D \geq \boldsymbol{n} < n \wedge \mathbb{k} = 0 \wedge$

$j_{sa}^{s} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa}^{s} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge \mathbb{k} = \mathbb{k} > 0 \wedge$

$j_{sa}^{s} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik} - \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ \ )}$$

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$$\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_{s}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+}^{(\ )} {}_{-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-\right.}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}\right.}\cdot$$

$$\frac{(\boldsymbol{l_s}$$

$$k+$$

$$\cdot(j_s-2)!}\cdot$$

$$\frac{(D-$$

$$(D+j^{sa}+s-\boldsymbol{n}-$$

$$-j_{sa})!$$

$$\boldsymbol{n}+j_{sa}-j^{sa}-s)!$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+$ $\leq j_{ik}+j_{sa}^{ik}-j$ $\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}$ $-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-$ $>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq$ $< n \wedge \boldsymbol{l_s} \leq$ $-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-$ $+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

j_{ik} $-j_{sa}^{ik} \leq j^{s}$ $\boldsymbol{n}+j_{sa}$ $s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}$ $1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$D+j$ $-\boldsymbol{n}<$ $+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n}$ $\wedge I=\mathbb{k}=0 \wedge$

$<j^{i}$ $1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2} \sum_{j_{ik}=j_s+j_{sa}}^{(} \sum_{(j^{sa}=j_{ik}+j_{sa}-}^{(} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}}^{(n_i-j_s+1)} \sum_{j_s+1)}^{} \sum_{n_{ik}=n_{is}+}^{( )} \sum_{j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{(n_i + j_{sa}^{} - j^{sa} - s - I - j_{sa}^{ik})!}{(n_i - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$((D - \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fz_{j_{ik}, j^{sa}}^{DSD} = \sum_{k=} \sum_{(j_s = \boldsymbol{l_{sa}} + \boldsymbol{n} - D - j_{sa} + 1)}^{(\boldsymbol{l_{ik}} - k - j_{sa}^{ik} + 2)} \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{(\ )} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{} \sum_{(\boldsymbol{l_s} - k + 1)} \sum_{(D - s + 1)}$$

$$\sum_{j_{ik} + j_{sa}^{ik} - 1} \sum^{(\ )}_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum^{(\ )}_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$(D > \quad n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=\boldsymbol{n}+j_{sa}-1}^{(\quad)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \frac{\left(n_{i} \quad j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{\quad - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D > \boldsymbol{n} < n \wedge j_{s} \quad - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$\sum_{j_s, j_{ik}, J}^{DSD} \sum_{k=1}^{D+\boldsymbol{l}_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_{ik}}+\boldsymbol{n}+j_{sa}-D-j_{sa}^{ik})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge$ [illegible] $\leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{s}^{s}$ [illegible] $\cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}$ [illegible] $, j_{sa}^{i}\} \wedge$

s [illegible] $4 \wedge \boldsymbol{s} = s$ [illegible] $\mathbb{k} \wedge$

$\mathbb{k}_z$ [illegible] $= 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )} \sum_{j_{ik} = \boldsymbol{l_{ik}} + \boldsymbol{n} - D}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} $$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - 1) \wedge$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s)$

$(D \geq \boldsymbol{n} < \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \left(j^{sa}=j_{ik}+j_{sa}-j^{ik}\right.
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=}^{(n_i-j_s+1)} \mathbb{k}-j_s+1)
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{=n_{ik}+j_{ik}-j^{sa}}
$$

$$
\frac{\left(n_i+j_{ik}+\right.^{sa}-s-\left.j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-)!\cdot\left(\boldsymbol{n}+\right.+j_{sa}-^{sa}-\left.j_{sa}^{ik}\right)!}\cdot
$$

$$
\frac{-k-1)!}{-j_s-+1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(D-)!}{(D+^{a}+s-\boldsymbol{l_i}-)!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+\wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq {}^{a}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+-j_{sa}^{ik} \leq j^{s}\boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\wedge \boldsymbol{l_{sa}}+-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$((D\boldsymbol{n}<n \wedge I=-0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{s}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\{j^{s}_{sa},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=) \vee$

$>n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

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$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s}$$

$$\sum_{n_i = \boldsymbol{n}}^{n} \sum_{= \boldsymbol{n} + j_s + 1)}$$

$$\sum_{n_{i}} \sum_{(n_{sa} = + j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{(n_i + \quad + j_{sa} \quad ^{sa} - s \quad)!}{(n_i - \boldsymbol{n} - I)! \quad + j_{ik} \quad - j^{sa} - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} \quad k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{\quad - \boldsymbol{l_i})!}{(D \quad j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j \quad \leq j_{ik} - j_{sa}^{ik} \quad \wedge j_s + j_{sa}^{ik} - 1 \quad j \quad j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \quad j^{sa} \leq \boldsymbol{n} \quad j_{sa} - s \quad$

$\boldsymbol{l_{ik}} \quad ^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \quad + j_{sa}^{ik} \quad _{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D \geq \boldsymbol{n} \quad n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j \quad - 1 \wedge j \quad _{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j \quad j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$> 3 \wedge \quad s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum^{(\boldsymbol{l_{sa}} - k + 1)}_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D}$$

$$\sum_{n_i = \boldsymbol{n}}^{n} \sum^{(\quad j_s + 1)}_{= \boldsymbol{n} + \quad j_s + 1)}$$

$$\sum_{\quad} \sum^{(\quad)}_{\quad + j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{(n_i + \quad + j_{sa} \quad ^{sa} - s \quad)!}{(n_i - \boldsymbol{n} - I)! \quad \boldsymbol{n} + j_{ik} \quad _{sa} - j^{sa} - s - j^{ik}_{sa})!} \cdot$$

$$\frac{(\boldsymbol{l_s} \quad k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{\quad - \boldsymbol{l_i})!}{(D \quad j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j \quad \leq j_{ik} - j^{ik}_{sa} \quad \wedge j_s + j^{ik}_{sa} - 1 \quad j \quad j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad j^{sa} \leq \boldsymbol{n} \quad j_{sa} - s \quad$

$\boldsymbol{l_{ik}} \quad ^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \quad + j^{ik}_{sa} \quad _{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D \geq \boldsymbol{n} \quad n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j \quad - 1 \wedge j \quad _{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s} : \{j^{s}_{sa}, \cdots, j \quad j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$\quad > 3 \wedge \quad s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s} : \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j^{ik}_{sa})}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j^{ik}_{sa} + 1)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum^{(\ j_s + 1)}$$

$$\sum_{n_{ik}} \sum_{(n_{sa} = \boldsymbol{n} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{(n_i + j_{sa} - j^{sa} - s - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\ + j_{ik} + \ - j^{sa} - s - j^{ik}_{sa})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \ j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D \ j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \ \wedge j_s + j^{ik}_{sa} - 1 \ \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \ ^{sa} \leq \boldsymbol{n} \ _{sa} - s$

$\boldsymbol{l_{ik}} \ ^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l} \ + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} \ \wedge I = \mathbb{k} = 0) \wedge$

$j_{sa} \ - 1 \wedge j_{sa} \ - j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j \ j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$\ = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}^{(\boldsymbol{l_s} + j_{sa} - k)} \sum_{(j^{sa} = \boldsymbol{l_s} + \boldsymbol{n} \ldots_a - D - 1)}^{}$$

$$\sum_{\ldots}^{(n_i \ldots + 1)}$$

$$\ldots + \mathbb{k} \, (n_{is} = \boldsymbol{n} + \mathbb{k} - \ldots)$$

$$\sum^{(\ )}$$

$$n_{ik} = n_{is} \ldots j_{ik} \, (n_{sa} = \ldots^{sa} - \mathbb{k})$$

$$\frac{\left(n_i + j_{ik} + \ldots_a - j^{sa} \ldots s - I - j^{ik}_{sa}\right)!}{(n_i \ldots \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + \ldots + j_{sa} - j^{sa} - s - j^{ik}_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l} \ldots j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + \ldots^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \ldots < n \wedge \boldsymbol{l_s} > \ldots - \boldsymbol{n} + 1 \wedge$

$2 \ldots j_s \leq j_{ik} - \ldots^{ik} + 1 \wedge \ldots + j^{ik}_{sa} - 1 \ldots \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} \ldots_{sa} - j^{ik}_{sa} \leq j^{\ldots} \ldots \boldsymbol{n} + j_{sa} \ldots s \wedge$

$\ldots_{ik} - j^{ik}_{sa} \ldots 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \ldots j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D > \boldsymbol{n} < n \wedge \ldots = 0 \wedge$

$j_{sa} \leq j^i_{sa} \ldots \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\ldots \{j^s_{sa}, \ldots, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s} : \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}^{(\boldsymbol{l_{sa}} - k + 1)} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n}_{sa} - D - s)}^{}$$

$$\sum_{n_{is} = \boldsymbol{n} + \mathbb{k}}^{(n_i - \ +1)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - \ )}^{}$$

$$\sum_{n_{ik} = n_{is} - j_{ik}}^{(\ )} \sum_{(n_{sa} = \ - j^{sa} - \mathbb{k})}^{}$$

$$\frac{\left(n_i + j_{ik} + \ - j^{sa} \ - s - I - j_{sa}^{ik}\right)!}{(n_i \ \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + \ + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l} \ j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + \ ^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \ < n \wedge \boldsymbol{l_s} > \ - \boldsymbol{n} + 1 \wedge$

$2 \ j_s \leq j_{ik} - \ ^{ik} + 1 \wedge \ + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} \ _{sa} - j_{sa}^{ik} \leq j^{ \ } < \boldsymbol{n} + j_{sa} \ s \wedge$

$_{ik} - j_{sa}^{ik} \ 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \ j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge \ = 0 \wedge\right.$

$j_{sa} \leq j_{sa}^{i} \ \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s} : \left\{j_{sa}^{s}, \cdots, \ _{sa}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s} : \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n}}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j^{ik}_{sa} + 1}$$

$$\sum_{(n_i}^{(} \sum_{n_{} + \mathbb{k}\ (n_{is} = \boldsymbol{n} + \mathbb{k} -}^{(\ )}$$

$$\sum_{n_{ik} = n_{is} + \ j_{ik}\ (n_{sa} = n_{ik}}^{j^{sa} - \mathbb{k})}$$

$$\frac{\left(n_i + j_{ik} + \ - j^{sa} \ - I - j^{ik}_{sa}\right)!}{(n_i \ \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + \ + j_{sa} - j^{sa} - s - j^{ik}_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\ - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + {}^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \ < n \wedge \boldsymbol{l_s} > D \ \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - \ + 1 \wedge j \ j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} \ - j^{ik}_{sa} \leq j^{s} \ \boldsymbol{n} + j_{sa} \ s \wedge$

$\boldsymbol{ik} - j^{ik} \ = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \ j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D > \boldsymbol{n} < n \wedge \ = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} \ \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\{j_s \ ^{k}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_i}}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}$$

$$\sum_{n_{ik}}$$

$$\frac{+ j_{ik} + j_{sa}}{(n_i - \boldsymbol{n}}$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(\quad + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l}$ $> D - \boldsymbol{n}$ $1 \wedge$

$2 \leq$ $\leq j_{ik} - j_{sa}^{ik} +$ $\wedge j_s + j_s$ $- 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}$ $j_{sa}^{ik} \leq j^{sa} \leq$ $+ j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} -$ $^{ik} + 1 =$ $\boldsymbol{a} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n}$ $\wedge I = \mathbb{k} = 0 \wedge$

$<$ j_{sa}^{i} $1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_i}}^{(\ )}
$$

$$
(\boldsymbol{l_i} + \quad - k - s + 1)
$$

$$
\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}}} \quad \sum_{j^{sa} = \boldsymbol{l_{sa}}} \quad (\boldsymbol{n} - D)
$$

$$
(n_i - \quad
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}} \quad \sum_{= \boldsymbol{n} + \mathbb{k} - j_s + 1)}
$$

$$
\sum_{n_{ik} \quad + j_s - j_{ik}} \quad \sum_{= n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{+ j_{ik} + j_{sa} \quad ^{sa} - s - I - j_{sa}^{ik})!}{(n_i - \boldsymbol{n} \quad)! \cdot (\boldsymbol{n} + j \quad + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(\quad + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l} \quad > D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad \wedge j_s + j_{sa} \quad 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad _{ik} + j_{sa} \quad _{sa}^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad ^{ik} + 1 = \quad \boldsymbol{a} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$\quad < j_{sa}^{i} \quad 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_i}}$$

$$(\boldsymbol{l_{ik}} + j_{sa} - j_{sa}^{ik} + 1)$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{} D)$$

$$(n_i - j_s$$

$$\sum_{} \sum_{} = \boldsymbol{n} + \mathbb{k} - j_s + 1)$$

$$\sum_{n_{ik}} \sum_{} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})$$

$$\frac{(\quad + j_{ik} + j_{sa} - \quad^{sa} - s - I - j_{sa}^{ik})!}{- \boldsymbol{n} -)! \cdot (\boldsymbol{n} + j_{} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(+ j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad^{ik} + 1 = \quad \boldsymbol{sa} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < \quad \wedge I = \mathbb{k} = 0 \wedge$

$\quad < j \quad 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s - \boldsymbol{l_s} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum^{(\boldsymbol{l_s} + \quad - k)}
$$

$$
\sum_{j_{ik} = j^{sa} \quad - \boldsymbol{l_{sa}}}^{} \sum^{(j^{sa} = \boldsymbol{l_{sa}} + \quad)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum^{(n_i - j_s + 1)}
$$

$$
\sum^{(\ )} \sum_{n_{ik} = n_{is} + \quad - j_{ik}}^{} (n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})
$$

$$
\frac{\left(n_i + \quad + j_{sa} \quad - s - I - j_{sa}^{ik}\right)!}{(n_i \quad - I)! \cdot (\quad + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge$

$\quad \le j_s \le \quad - j_{sa}^{ik} + 1 \wedge \quad + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D > \boldsymbol{n} \quad n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s - 1 + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{(\ =\boldsymbol{l_{ik}}+\boldsymbol{n}+j_{sa}-D-\ )}^{(j_s+j_{sa}-k-\ 1)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(\ +j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+\ j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i + \ + j_{sa} \ sa} - s - I - j_{sa}^{ik})!}{(n_i - \ - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \ge \ \le n \wedge \boldsymbol{l_s} > D \ \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j \ - j_{sa}^{ik} + 1 \wedge \ s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \ - j_{sa}^{ik} \ \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \ = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D > \ \ n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{(j_s = j_{ik} \ldots \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{D-\boldsymbol{n}+1} \sum_{(\boldsymbol{l_{sa}} - k \ldots}^{(\quad)}$$

$$\sum_{j_{ik} = j \ldots \boldsymbol{l_{sa}}}^{} \sum_{(j^{sa} = \boldsymbol{l_{ik}} \ldots + j_{sa} - D - j_{sa}^{ik})}$$

$$\sum_{\ldots}^{n} \sum_{(\ldots + 1)}$$

$$\sum_{n_i \ldots + \mathbb{k}}^{} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} \ldots - j_{ik}}^{} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{(\ldots + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik})!}{(n_i - \boldsymbol{n} \ldots I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < \ldots \wedge \boldsymbol{l_s} > D - \ldots + 1 \wedge$

$2 \leq \ldots \leq j_{ik} - j_{sa} \ldots \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \ldots^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\ldots - j^{ik} \ldots 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \quad (j_s = j_{ik} \quad \boldsymbol{l_{ik}})$$

$$+ j_{sa} - k)$$

$$\sum_{} \quad \sum_{} \quad (j^{sa} = \quad D - j_{sa}^{ik})$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\quad)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{\left(n_{} \quad j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{\quad - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \quad < n \wedge \boldsymbol{l_s} \quad \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$+ j_{} \quad {}_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}} \sum_{j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_s} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{sa}^{i} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} ^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}} \sum_{(\boldsymbol{l_{sa}}} ^{+1)}
$$

$$
\sum_{j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_s}} \sum_{j^{sa} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\boldsymbol{n}_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik})!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\leq j_s \leq - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} ^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}} \sum_{j_{sa}^{ik}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{j_{sa}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}-D-1)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\boldsymbol{l}_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik})!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$< j_{sa} \leq j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz^{S}_{j_s} \Big(\sum_{\quad} \sum_{\quad} \Big)$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-k} \sum_{j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}}}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s} \sum_{j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}}}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\boldsymbol{n} \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{\quad} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\quad)}$$

$$\sum_{\boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} + 1}^{\quad} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\quad)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s}^{\cdots j^{sa}} = \sum_{k=\cdots}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_{ik}} + \boldsymbol{n} - D}^{\boldsymbol{l_i} - k + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s}^{\boldsymbol{D-n+1}} {}_{j^{sa}} = \sum_{k=}^{\boldsymbol{D-n+1}} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa}^{ik} - D - 1}^{\boldsymbol{l_s} + j_s^{i} \quad k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\quad)}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_s} - k - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\quad)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$S_{i\ldots j\ldots}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j_{sa}^{ik} - D - j_{sa}}^{\boldsymbol{l_i} + j_{sa}^{ik} - k - s + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j_{sa}^{ik} - D - j_{sa}}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

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$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} -$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq$ $_{a}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} =$ $+ \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j_{sa}^{ik} - D - j_{sa}}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\right\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\right\}\wedge$

$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$

$\mathbb{k}_z:z=1)\big)$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_i}+j_{sa}^{ik}-k-s+1}\sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)!}\cdot \frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k)!\cdot(\ -2)!}\cdot \frac{(D-\ )!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}\ \boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l}}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa}$ $_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j$ $= \boldsymbol{l_{ik}} \wedge \boldsymbol{l}$ $j_{sa} - s =$ $\wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge$ $_{s} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa},$ $j_{sa}^{i}\} \wedge$

s $3 \wedge \boldsymbol{s} =$ $\wedge$

$(D$ $\boldsymbol{n} < n \wedge I =$ $> 0 \wedge$

$j_{sa} \leq j_{sa}$ $1 \wedge j_{sa}^{ik} = j_{s}$ $1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{i}$ $j_{sa}\} \wedge$

s $4 \wedge$ $s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1) \Rightarrow$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_{sa}}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_{sa}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}-j_{sa}-j^{sa}-\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{-k+\ !\cdot(j_s-2)!}\cdot$$

$$\frac{(-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{l_{sa}})!\,(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j^{ik}\leq j_{ik} \leq +j_{sa}^{ik}-j\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}-j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-=\boldsymbol{l_{ik}} \wedge \boldsymbol{l}\ j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I \leq =0 \wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge =j_{sa}-1 \wedge j_{sa}^{s}\leq ^{ik}-1 \wedge$

$\boldsymbol{s}\colon\{\ \cdots,j_{sa}^{ik},j_{sa},\cdots\}\wedge$

$>3\wedge \ s)\vee$

$(D\geq <n\wedge \ 0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\colon\{j_{sa}^{s},\cdots,\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge \boldsymbol{s}=s+\mathbb{k}\wedge$

$\mathbb{k}_z\colon z=1\big)\Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_s}+j^{ik}_{sa}-k} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l}}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} - \quad ^{sa} - s - \quad - j^{ik}_{sa}\right)!}{(n_i \quad \boldsymbol{n} - 1)! \cdot \left(\boldsymbol{n} - \quad + j_{sa} \quad ^{sa} \quad s - j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{\boldsymbol{l_s} - k - 1)!}{\quad - j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad - \boldsymbol{l_i})!}{(D + \quad - \boldsymbol{n} - \boldsymbol{l} \quad)! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{\quad} < \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + \quad ^{ik} - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \quad \boldsymbol{n} < n \wedge I = \quad = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} \quad 1 \wedge j^{ik}_{sa} = j_{s} \quad 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, j_{sa} \quad _{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} \quad \big) \vee$

$(D > \boldsymbol{n} \quad t \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik} = \boldsymbol{l_s} + \boldsymbol{n} + j^{ik}_{sa} - D - 1}^{\boldsymbol{l_i} + j^{ik}_{sa} - k - s + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}}}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(j_s + 1)}$$

$$\sum_{n_{ik} = \quad}^{\quad} \sum_{(n_{sa} = \quad j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{(n_i + j_{sa} - \quad - s - 1)!}{(n_i - \boldsymbol{n} - I)! \quad + j_{ik} + \quad - j^{sa} - s - j^{ik}_{sa})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D \quad j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad ^{sa} \leq \boldsymbol{n} \quad _{sa} - s \wedge$

$\boldsymbol{l_{ik}} \quad ^{ik} + 1 = \boldsymbol{l_s} \wedge \quad + j^{ik}_{sa} - \quad _{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq \quad - 1 \wedge j_{sa} \quad - j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j \quad j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$\quad 2 \wedge \quad = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_s} + \boldsymbol{n} + j^{ik}_{sa} - D - 1}^{\boldsymbol{l_{sa}} + j^{ik}_{sa} - k - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \mathbb{k}}^{(n_i - \ \ 1)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s)}^{(\ )}$$

$$\sum_{n_{ik} = n_{is} + j_{ik}}^{(\ )} (n_{sa} = n_{ik} \ \ j^{sa} - \mathbb{k})$$

$$\frac{\left(n_i + j_{ik} + \ \ - j^{sa} \ \ - I - j^{ik}_{sa}\right)!}{(n_i \ \ \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + \ \ + j_{sa} - j^{sa} - s - j^{ik}_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\ \ - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + \ \ ^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \ \ < n \wedge \boldsymbol{l_s} > D \ \ \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - \ \ + 1 \wedge j_s \ \ j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \ \ - j^{ik}_{sa} \leq j^{sa} \ \ \boldsymbol{n} + j_{sa} \ \ s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} \ \ = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \ \ j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ \ < n \wedge \ \ = 0 \wedge$

$j_{sa} \leq j^i_{sa} \ \ \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\{ ; s \ \ ^{ik}_{sa}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_i}}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}^{ik}-D}^{\boldsymbol{l_{ik}}-k+1} \sum^{(\ )}_{=j_{ik}+} -\boldsymbol{l_{ik}})$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-)_s} \sum_{=\boldsymbol{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}} \sum_{+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{(\ + j_{ik} + j_{sa} - {}^{sa} - s - I - j_{sa}^{ik})!}{(\ - \boldsymbol{n} -)! \cdot (\boldsymbol{n} + j_{} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(\ + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad \wedge j_s + j_{sa} \quad 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} \quad {}^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad + 1 = \quad \boldsymbol{sa} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$\quad < j_{} \quad 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_i}-D-s+1)}^{(\boldsymbol{l_i}-k-s+2)} \sum_{j_{ik}=j_s+\boldsymbol{l_s}\,(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\cdots)}^{(\cdots)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}\,(\cdots-j_s+1)}^{n\,(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+\cdots-j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + \cdots + j_{sa} - \cdots^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \cdots - I)! \cdot (\cdots + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \ge \cdots < n \wedge \boldsymbol{l_s} > D \cdots \boldsymbol{n} + 1 \wedge$

$\cdots \le j_s \le \cdots - j_{sa}^{ik} + 1 \wedge \cdots + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \cdots - j_{sa}^{ik} \le \cdots \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \cdots = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \ge \boldsymbol{n} \cdots n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{sa}}+1}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)} \sum_{j_{ik}=j_s+\boldsymbol{l_s}}^{(} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{n_{ik}=n_{is}+}^{(} \frac{\left(n_i + \quad + j_{sa} - {}^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \quad - I)! \cdot (\quad + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge$

$\quad \le j_s \le \quad - j_{sa}^{ik} + 1 \wedge \quad + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \ge \boldsymbol{n} \quad n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-j_{sa}^{ik}+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)} \sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}}^{(} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-}^{} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+}^{(\ )} \sum_{j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{(n_i + j_{} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik})!}{(n_i - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \le j^{} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\quad > \quad < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{1}^{D-\boldsymbol{n}+1} \sum_{(j_s=}^{(\boldsymbol{l_s}-k+1)} \sum_{+\boldsymbol{n}-D)}$$

$$\sum_{=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}$$

$$\sum_{(j_s+1)}$$

$$\sum_{+\mathbb{k}\,(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+} \sum_{j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{(+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik})!}{(n_i-\boldsymbol{n}\ \ I)!\cdot(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!} \cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\geq \boldsymbol{n} < \wedge \boldsymbol{l_s} > D - + 1 \wedge$

$2 \leq j \leq j_{ik} - \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - ^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$- j_{sa}^{ik} = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} \sum_{(j_s = \boldsymbol{l_i} + \boldsymbol{n} - s + 1)} \sum_{= j_s + \boldsymbol{l_{ik}} - \boldsymbol{l_s}} \sum_{(= j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})} \sum_{(j_s + 1)} \sum_{+ \mathbb{k}\,(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)} \sum_{n_{ik} = n_{is} +} \sum_{j_{ik}\,(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})} \frac{(+ j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik})!}{(n_i - \boldsymbol{n})! \cdot (\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\geq \boldsymbol{n} < \wedge \boldsymbol{l_s} > D - + 1 \wedge$

$2 \leq j \leq j_{ik} - \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - ^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$- j_{sa}^{ik} = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=\boldsymbol{l_{ik}}-j_{sa}^{ik}+2}^{D-\boldsymbol{n}+1} \sum_{(n_i=\boldsymbol{l_i}+\boldsymbol{n}-s+1)} \sum_{n_i+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(n_{ik}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})} \sum_{n_i} \sum_{+\mathbb{k}\,(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)} \sum_{} \sum_{-j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{(\quad + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik})!}{(n_i - \boldsymbol{n} \quad I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \quad + 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa} \quad \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$- j^{ik} \quad 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}}^{(\boldsymbol{l_s}-}
$$

$$
\sum_{j_{}+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\ )} \sum_{\boldsymbol{a}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n_{} \quad (n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_{} \; j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{\quad - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \quad < n \wedge \boldsymbol{l_s} \quad \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{sa} \quad _{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-k+1)}^{(\boldsymbol{l}_i-k-1)} \sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\quad)} \sum_{(j^{sa}=\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\quad)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_{i} - j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(\quad - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} = D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{sa}^{i} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} \sum_{(j_s = \boldsymbol{l_{sa}} + \boldsymbol{n} - D - \cdots + 1)}^{D - \boldsymbol{n} + 1} \sum_{j_{ik} = \cdots + \boldsymbol{l_{ik}} - \boldsymbol{l_s} (\cdots - \boldsymbol{l_{ik}})}^{(\boldsymbol{l_{ik}} - k - \cdots + 2)} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\ )} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\left(n_{\cdots} - j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{\cdots - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \cdots < n \wedge \boldsymbol{l_s} \cdots \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{\cdots} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\cdots + j_{\cdots} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_s}} \sum_{j_{ik}=j_s+\boldsymbol{l_s}}^{} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\leq j_s \leq \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{l_s}+1} \sum_{(j_s-1+\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_i}-1)}
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\boldsymbol{l_i} + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik})!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$< j_{ik} \leq j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, J}^{DSD} \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_{sa}=k+j_{sa}-2)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)} \sum_{(j_{sa}=j_{sa}^{ik}+1)}^{(\quad)} \sum_{j_{ik}=\boldsymbol{n}+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\quad)} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{n} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(\quad)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\boldsymbol{> n} \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz S_{j_s}^{D} {}^{j^{sa}} = \sum_{k=} \sum_{(j_s = \boldsymbol{l_{ik}} + \boldsymbol{n} - D - j_{sa}^{ik} + 1)}^{D-n \quad (\quad +1)}$$

$$\sum_{j_{ik}= \boldsymbol{l_{ik}} - \boldsymbol{l_s}}^{(\ )} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fz^{SD}_{\dots j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_s}+\boldsymbol{n}-D)}^{(\boldsymbol{l_i}-k-s+2)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fz S_{j_s}^{D} {}^{j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_s}+\boldsymbol{n}-D)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)} \sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s}^{\,\cdot\,\cdot\,\cdot

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik} = j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_{sa}}-k+1)} \left(j^{sa} = \boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s\right)
$$

$$
\sum_{n_i = \boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i - j_s+1)}
$$

$$
\sum_{n_{ik} = n_{is}+j_s-j_{ik}}^{(\ )} \left(n_{sa} = n_{ik}+j_{ik}-j^{sa}-\mathbb{k}\right)
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}$

$D+s-\boldsymbol{n}<\boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa} \wedge j_{sa}^{s} \leq j_{sa}^{ik} \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s \wedge \mathbb{k} \wedge$

$\mathbb{k}_z: z=1) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}}\ \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ \ )}$$

$$\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j_{sa}^{ik}+1)}\ \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)!}\cdot \frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k)!\cdot(-2)!}\cdot \frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$D+s-\boldsymbol{n} < \boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-(\boldsymbol{n}+1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

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$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}=j^{sa}+j^{ik}_{sa}-j_{sa}} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j^{ik}_{sa}+1)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}} \sum^{(} \quad j_s+1)
$$

$$
\sum_{n_{ik}} \sum^{(\ )}_{(n_{sa}=} {}_{j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{(n_i + \quad + j_{sa} - \quad sa} - s - 1 \quad)!}{(n_i - \boldsymbol{n} - I)! \cdot \quad + j_{ik} + \quad - j^{sa} - s - j^{ik}_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D \quad j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \leq \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad ^{sa} \leq \boldsymbol{n} \quad _{sa} - s$

$\boldsymbol{l_{ik}} \quad ^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l} \quad + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} \leq D - \quad + 1 \wedge$

$1 \leq \quad j_{ik} - j_{sa} \quad 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad ^{ik} - 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}} \sum_{+j_{sa}^{ik}-j_{sa}} \sum_{=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik})!}{(\boldsymbol{n}_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$j_{ik} \leq j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz S_{j_s, j_{ik}, j}^{DSD} \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{l_i}} \sum_{(\quad+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\quad)} \sum_{j_{ik}=j^{sa}\quad-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j}^{DSD} \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{l_i}} \sum_{(\quad+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\quad)} \sum_{j_{ik}=j^{sa}+\quad-j_{sa}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$(D > \quad n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$f_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s+\mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$\mathcal{S}_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_s}+j_{sa}-k)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)!}\cdot$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D+s-\boldsymbol{n} < \boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1) \vee$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa} \quad \wedge j_{sa}^{s} \leq j_{sa}^{ik} \quad \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge \quad = \mathbb{k} > 0 \wedge$

$j_{sa} \quad j_{sa}^{i}-1 \wedge j_{sa}^{ik} \quad j_{sa}-1 \wedge \quad \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s \quad \mathbb{k} \wedge$

$\mathbb{k}_z, z = 1) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ \ )}$$

$$\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_s}+j_{sa}-k)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)!}\cdot \frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k)!\cdot(-2)!}\cdot \frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}} \wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i} \leq \boldsymbol{n}+\boldsymbol{l_s}+s-2(j_{sa}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ \ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j^{ik}_{sa}-D-s}^{\boldsymbol{l_{sa}}+j^{ik}_{sa}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}}}^{(\ \ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(\ \ \ \ j_s+1)}^{(\ \ \ \ j_s+1)}
$$

$$
\sum_{n_{ik}=\ \ \ \ }^{\ \ \ \ } \sum_{(n_{sa}=\ \ \ \ j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}
$$

$$
\frac{(n_i + j_{sa} - j^{sa} - s - 1)!}{(n_i - \boldsymbol{n} - I)! \cdot (\ \ + j_{ik} + \ \ - j^{sa} - s - j^{ik}_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \ \ j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D \ \ \boldsymbol{l_i})!}{(D + j^{sa} + \ \ - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \ \ \wedge j_s + j^{ik}_{sa} - 1 \leq \ \ \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \ \ \leq \boldsymbol{n} \ \ - s \wedge$

$\boldsymbol{l_{ik}} \ \ + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \ \ \wedge \boldsymbol{l_s} \leq D - \ \ + 1 \wedge$

$1 \leq \ \ < j_{ik} - j_{sa} \ \ 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \ \ ^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\ \ ^{ik} \ \ 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}=k+1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}=k+\boldsymbol{n}+j_{sa}^{ik}} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik})!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$< j \quad {}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

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$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$)_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+s-\boldsymbol{n} < \boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik}=$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big) \wedge$

$$fz S_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-1)!}$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big) \wedge$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_s}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_{ik}}-j_{sa}-s=$

$\left((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s \geq 3 \wedge \boldsymbol{s}=$

$(D \geq \boldsymbol{n} < n \wedge I=$

$j_{sa} \leq j_{sa}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}\right\} \wedge$

$s \geq 4 \wedge s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1) \Rightarrow$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}}\ \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{\left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+\ -j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-\ -j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+\ -j^{sa}-\ -j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-\ -1)!}{k+\ !\cdot(j_s-2)!}\cdot$$

$$\frac{(\ -\boldsymbol{l_i})!}{(D+j^{sa}-\ -\boldsymbol{l_{sa}})!\ +\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+\ \leq j_{ik}+j_{sa}^{ik}-\ \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+\ -s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-\ >\boldsymbol{l_{ik}}\wedge\boldsymbol{l}\ j_{sa}-s>\boldsymbol{l_{sa}})\vee$

$(D\geq\ <n\wedge\boldsymbol{l_s}\leq\ -\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-\ +1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+\ -j_{sa}^{ik}\leq j^{sa}\ \boldsymbol{n}+j_{sa}\ s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}\ 1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}\ j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge$

$D+s\ \boldsymbol{n}<\boldsymbol{l_i}\ \boldsymbol{l_s}+s-\boldsymbol{n}-1)\big)\wedge$

$\big((D\geq\boldsymbol{n}<\ \wedge I=\mathbb{k}=0\wedge$

$<j^i\ 1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=1+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}\,(n_{is}}^{n} \sum^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+} \sum_{j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{sa}^{} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \le j_{} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D > \quad < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} \sum_{(j_s = j_{ik} \; ^{ik}_{sa}+1)}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \; \sum_{j_{ik} \; ^{ik}_{sa}-D-s \; (} \; \sum_{j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{\boldsymbol{l_s}+j_{sa}^{ik}-} \; \sum_{+1)}^{(\quad)} \; \sum_{n_i=\quad \mathbb{k} \; (n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{n} \; \sum_{=n_{ik}-j_{ik} \; (n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} \quad I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$((D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge$

$2 \leq \quad j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-I} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )} \sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s +$

$\mathbb{k} - z = 1))$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)} \sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\ )} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})} $$

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$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_s} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} =$ $\vee$

$(D \geq \boldsymbol{n} < n \wedge I =$ $> 0 \wedge$

$j_{sa} \leq j_{sa}$ $- 1 \wedge j_{sa}^{ik} = j_{sa}$ $- 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}$ $, j_{sa}, \cdots$ $_{sa}\} \wedge$

$s \geq$ $\wedge$ $= s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k)!\cdot(-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$\big((D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}})\vee$

$(D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i}\leq D+\boldsymbol{l_s}+s-(\boldsymbol{n}+1)\big)\wedge$

$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j^{ik}_{sa}+2)}
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\quad)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}(\quad)+\mathbb{k}(j_s+1)}^{n} \sum_{(\quad)}^{(\quad j_s+1)}
$$

$$
\sum_{n_{ik}=\quad+j_s} \sum_{(n_{sa}=n_i+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{(n_i + j_{sa} - j^{sa} - s - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\quad + j_{ik} + \quad - j^{sa} - s - j^{ik}_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \leq \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq \quad \leq \boldsymbol{n} + \quad - s \wedge$

$\boldsymbol{l_{ik}} - \quad + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l} \quad + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} \leq D - \quad + 1 \wedge$

$1 \leq \quad j_{ik} - j_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad - 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}} \sum_{\boldsymbol{l_i}+\boldsymbol{n}-D-s+1}^{\boldsymbol{n}-\boldsymbol{l_i}} \left(\boldsymbol{l_{ik}} \right.
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}} \sum_{\left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{\left(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1\right)}^{\left(n_i-j_s+1\right)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{\left(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}\right)}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{\left(n_i - \boldsymbol{n} - I\right)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$j_{ik} \leq j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \Bbbk > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \Bbbk, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \Bbbk \wedge$

$\Bbbk_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-} \sum_{D-s+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}} \sum_{+\boldsymbol{l_{ik}}-\boldsymbol{l_s}\ j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ \ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\Bbbk}^{n} \sum_{(n_{is}=\boldsymbol{n}+\Bbbk-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\Bbbk)}^{(\ \ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D > \boldsymbol{n} < \ \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \Bbbk = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-} \sum_{D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\ )} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$(D > \quad n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_{ik}, j^{sa}}^{D} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s+\mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$f_{j_s, j_{ik}, j^{sa}}^{SD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)!}\cdot$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D+s-\boldsymbol{n} < \boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1) \vee$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa} \wedge j_{sa}^{s} \leq j_{sa}^{ik} \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s \wedge \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}$$

$$\frac{\left(n_i+j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k)!\cdot(-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$\big((D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}})\vee$

$(D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$D+j_{sa}-\boldsymbol{n}<\boldsymbol{l_{sa}}<D+\boldsymbol{l_s}-\boldsymbol{n}-1)\big)\wedge$

$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+j^{ik}_{sa}-j_{sa}}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j^{ik}_{sa}+1)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(\ \ \ j_s+1)}^{(\ )}
$$

$$
\sum_{n_{ik}=} \sum_{(n_{sa}=\ \ \ j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i + j_{sa} - \ \ ^{sa} - s - I)!}{(n_i - \boldsymbol{n} - I)! \cdot \ \ + j_{ik} + \ \ - j^{sa} - s - j^{ik}_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \ \ j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D \ \ j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \ \ \wedge j_s + j^{ik}_{sa} - 1 \leq \ \ \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \ \ ^{sa} \leq \boldsymbol{n} \ \ _{sa} - s$

$\boldsymbol{l_{ik}} \ \ ^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_i} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \ \ \wedge \boldsymbol{l_s} \leq D - \ \ + 1 \wedge$

$1 \leq \ \ \wedge j_{ik} - j_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \ \ ^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\ \ ^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+\cdots-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}
$$

$$
\left(\cdots + j_{sa}^{ik} - j_{sa}^{ik} + 1\right)
$$

$$
\sum_{j_{\cdots}^{sa}+j_{sa}^{ik}-\cdots} \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}
$$

$$
\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(\boldsymbol{n}_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < \cdots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

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$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fz^{\boldsymbol{s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{k=1}^{(\ )} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(\boldsymbol{l_s} + j_{sa} - k)} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\ )} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})} \frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+j_{sa}-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik} = j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik} =$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k},$ [illegible] $\cdots, j_{sa}^{i}\}$

$s >$ [illegible] $\boldsymbol{s} = s+\mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big)$ [illegible]

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )} \sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - 1) \wedge$

$\big(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+j^{ik}_{sa}-j_{sa}} \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D)}^{(\boldsymbol{l_s}+j_{sa}-k)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(\ )=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} - \quad ^{sa} - s - \quad - j^{ik}_{sa}\right)!}{(n_i \quad \boldsymbol{n} - 1)! \cdot \left(\boldsymbol{n} - \quad + j_{sa} \quad ^{sa} \quad - j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{\boldsymbol{l_s} - k - 1)!}{\quad - j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad - \boldsymbol{l_i})!}{(D + \quad - \boldsymbol{n} - \boldsymbol{l} \quad)! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{\quad} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad ^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \quad \wedge \boldsymbol{l_{sa}} + \quad ^{ik} - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq \quad \boldsymbol{n} + 1$

$\quad \leq j_s \leq \quad - j^{ik}_{sa} + 1 \wedge \quad + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \quad \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \quad > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\quad + j_{sa} \quad < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}
$$

$$
\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(\quad+\boldsymbol{n}-D)}^{(\quad)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(\quad)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_{\quad} j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{\quad - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D > \boldsymbol{n} < n \wedge j_{\quad} - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{\quad} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$S_{j_s, j_{ik}}^{DSI} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s - \mathbb{k} \wedge$

$\mathbb{k}_z : \mathbb{k}_z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - 1) \wedge$

$\big(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j^{ik}_{sa}-D-s}^{\boldsymbol{l_s}+j^{ik}_{sa}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=n_i-\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{\left(n_i + j_{ik} + \quad - s - \quad - j^{ik}_{sa}\right)!}{(n_i - \boldsymbol{n} - \quad)! \cdot \left(\boldsymbol{n} + \quad + j_{sa} \quad - j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{\quad - k - 1)!}{- j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad - \boldsymbol{l_i})!}{(D + \quad - \boldsymbol{n} - \boldsymbol{l}\quad)! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \quad \wedge \boldsymbol{l_{sa}} + \quad - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \quad < n \wedge \boldsymbol{l_s} \leq D \quad \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j \quad - j^{ik}_{sa} + 1 \wedge \quad s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq \quad \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \quad > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\quad < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{} \sum_{(j_s = j_{ik} \; ; \; 1)}^{D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}}} \left(\right)
$$

$$
\sum_{j_{ik} = \boldsymbol{l_i} + \; ; \; j_{sa}^{ik} - D - s \; (\; ; \; - \boldsymbol{l_{ik}})}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \left(\right)
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{\left(\right)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\left(n_{} + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(\quad - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \quad < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i} \quad j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad \quad j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, \ldots}^{DSI\ldots} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{s} \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = \mathbb{k} \wedge$

$\mathbb{k}_z = 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )} $$

$$ \sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j_{sa}^{ik} - D - j_{sa}}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )} $$

$$ \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} $$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - 1) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{}}^{(\quad)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\quad)}
$$

$$
\frac{\left(n_i+j_{ik}+\right.^{sa}-s-\left.j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-)!\cdot\left(\boldsymbol{n}+\right.+j_{sa}-\left.j_{sa}^{ik}\right)!}\cdot
$$

$$
\frac{-k-1)!}{-j_s-+1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(-\boldsymbol{l_i})!}{(D+-\boldsymbol{n}-\boldsymbol{l}!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}-1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq {}^{a}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+{}^{ik}_{sa}-j_{sa}^{ik} \leq j^{sa}+\boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\wedge \boldsymbol{l_{sa}}+{}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+-j_{sa}^{ik} \leq \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$<\boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-\cdots+1)}^{(\boldsymbol{l_{ik}}-k-\cdots+2)} \sum_{j_{ik}=\cdots+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_{\cdots} - j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(\cdots - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \cdots < n \wedge \boldsymbol{l_s} \cdots D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i\cdots} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\cdots - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$\sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum^{(\ )}_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{s} \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = \mathbb{k} \wedge$

$\mathbb{k}_z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - 1) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\ \ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\ \ \mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(\ \ =n_{ik}+j_{ik}-j^{sa}\ \ )}^{(\ \ )}
$$

$$
\frac{\left(n_i + j_{ik} - \ \ ^{sa} - s - \ \ - j^{ik}_{sa}\right)!}{(n_i - \boldsymbol{n} - 1)! \cdot \left(\boldsymbol{n} - \ \ + j_{sa} - \ \ - j^{ik}_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\ \ - j_s - \ \ + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\ \ - \boldsymbol{l_i})!}{(D + \ \ - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \ \ - j^{ik}_{sa} \leq j^{s} \ \ \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \ \ \wedge \boldsymbol{l_{sa}} + \ \ ^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \ \ - j^{ik}_{sa} \leq \ \ \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \ \ > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\ \ + j_{sa} \ \ < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D} \sum_{j_{ik}} \sum_{n_i=\boldsymbol{n}+\mathbb{k}} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \frac{\left(n_i \quad j_{ik}+j_{sa}-j^{sa}-s-I-j_{sa}^{ik}\right)!}{\quad -I)! \cdot \left(\boldsymbol{n}+j_{ik}+j_{sa}-j^{sa}-s-j_{sa}^{ik}\right)!} \cdot \frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})! \cdot (\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

$\big((D > \boldsymbol{n} < n \wedge \quad - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$+ j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$\sum_{j_s, j_{ik}, J}^{DSD} \sum_{k=1}^{D+\boldsymbol{l}_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}^{(\boldsymbol{l_s} + j_{sa} - k)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge$ $\leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{s}^{s}$ $\cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}$ $, j_{sa}^{i}\} \wedge$

s $4 \wedge \boldsymbol{s} = s$ $\mathbb{k} \wedge$

$\mathbb{k}_z$ $= 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )} $$

$$ \sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )} $$

$$ \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} $$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j_{ik} + j_{sa} - j^{sa} - s - I - j_{sa}^{ik}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - 1) \wedge$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s$

$(D \geq \boldsymbol{n} < \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l}}^{(\ \ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\ \mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ \ )}
$$

$$
\frac{\left(n_i+j_{ik}+\ \ -s-\ \ -j_{sa}^{ik}\right)!}{(n_i-\boldsymbol{n}-\ \ )!\cdot\left(\boldsymbol{n}+\ \ +j_{sa}\ \ -j_{sa}^{ik}\right)!}\cdot
$$

$$
\frac{\ \ -k-1)!}{-j_s-\ \ +1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(\ \ -\boldsymbol{l_i})!}{(D+j_{\ \ }-\boldsymbol{n}-\boldsymbol{l}\ \ )!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

$$
\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge
$$

$$
1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge
$$

$$
j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge
$$

$$
\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\ \ \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge
$$

$$
\boldsymbol{l_{sa}}>D+\boldsymbol{l_{ik}}+j_{sa}-\ \ -j_{sa}^{ik} \wedge \boldsymbol{l_i}>D+\boldsymbol{l_{sa}}+s-\boldsymbol{n}-j_{sa}) \vee
$$

$$
(D \geq \boldsymbol{n} < \ \ \wedge \boldsymbol{l_s} \leq D-\ \ +1 \wedge
$$

$$
1 \leq \ \ \leq j_{ik}-j_{sa}\ \ \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge
$$

$$
j_{ik}+j_{sa}-\ \ \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge
$$

$$
-j_{sa}^{ik}-1>\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge
$$

$$
\boldsymbol{l_{ik}}>D+\boldsymbol{l_s}+j_{sa}^{ik}-\boldsymbol{n}-1 \wedge \boldsymbol{l_i}>D+\boldsymbol{l_{sa}}+s-\boldsymbol{n}-j_{sa}) \vee
$$

$$
(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge
$$

$$
1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge
$$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa} + 1 > \boldsymbol{l_s} \wedge$

$\boldsymbol{l_{sa}} > D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1 \wedge \boldsymbol{l_i} > D + \boldsymbol{l_{sa}} + s - \boldsymbol{n} - j_{sa}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_i} > D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$${}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = 0$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=} \sum^{(\ )}_{-j_{sa}^{ik}+1)}
$$

$$
\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+} \sum^{(\ )}_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{(n_i + \quad + j_{sa}^{ik} \quad j_{ik} - s - j_{sa} - I)!}{(n_i - \quad - I)! \cdot (\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D \quad j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j \quad - j_{sa}^{ik} + 1 \wedge \quad s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \le j \quad \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D > \quad < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum^{D-\boldsymbol{n}+1} \sum^{(\quad)} \sum_{(j_s = j_{ik} \quad j_{sa}^{ik}+1)}
$$

$$
(\boldsymbol{l_{sa}} \quad \sum \quad \sum_{j_{sa}^{ik} - j_{sa} \quad {}^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}
$$

$$
\sum^{n} \quad \sum_{n_i \quad \mathbb{k} \, (n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}
$$

$$
\sum \quad \sum^{(\quad)}_{{}_{i} = n_i \quad - j_{ik} \, (n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{(\quad + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I)!}{(n_i - \boldsymbol{n} \quad I)! \cdot (\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \quad + 1 \wedge$

$2 \leq \quad < j_{ik} - j_{sa} \quad \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad j^{ik} \quad 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \left(\sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)} \right.$$

$$\left(\sum_{(\boldsymbol{l_{ik}} - k - j_{sa}^{ik} + 1)} \right.$$

$$\left(\sum_{j^{sa} + j_{sa}^{ik}} \right. \left(\sum_{(j^{sa} = \boldsymbol{l_{ik}} + 1} \right. \left. \left. - j_{sa}^{ik} \right) \right.$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}} \left(\sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \right.$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \left(\sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )} \right.$$

$$\frac{\left(n \quad j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(\quad - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \quad n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i} \quad j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad \quad j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=\cdots}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}
$$

$$
\sum_{j_{ik}=\cdots + j_{sa}^{ik} - j_{sa}} \sum_{j^{sa} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\cdots n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I)!}{\cdots_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \cdots \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz S_{j_s} \sum_{\quad}^{D-\quad} \sum_{\quad}^{(\ )} {}_{j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}} \sum^{(\boldsymbol{l_{sa}}-k+1)} {}_{-j_{sa}\ (j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum^{(n_i-j_s+1)} {}_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )} {}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\boldsymbol{n} \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{(\quad)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

$$(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik} + 1)$$

$$\sum_{} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 3 \wedge \boldsymbol{s} = s) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)\big) \Rightarrow$$

$$fzS_{j_s \cdots j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{(\boldsymbol{l_s} + j_{sa} - k)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}^{(\boldsymbol{l_i} + j_{sa} - k - s + 1)}
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$\mathcal{S}_{\dots}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik} + 1)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}^{(\boldsymbol{l_s} + j_{sa} - k)}
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}\sum_{(j^{sa}=\boldsymbol{l_{ik}}+\boldsymbol{n}+j_{sa}-D-j_{sa}^{ik})}^{(\boldsymbol{l_i}+j_{sa}-k-s+1)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}\big)!}\cdot$$

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$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}^{(\boldsymbol{l_{sa}} - k + 1)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

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$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}^{(\boldsymbol{l_s} + j_{sa} - k)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \wedge$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}^{(\boldsymbol{l_i} + j_{sa} - k - s + 1)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-$

$\left((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}=0\right.$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\right.$

s

$(D$

j_{sa}

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{i}\right.$

s

$\mathbb{k}_z:z=1)$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\ \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

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$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_{sa}}-k+1)} \sum_{(j^{sa}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}-D-1)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_{s}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+}^{(\ )} \quad -j^{sa}-\mathbb{k})$$

$$\frac{\left(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j^{s}\right.}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{-k+\ !\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\ )!}{(D+j^{sa}+s-\boldsymbol{n}-\ -j_{sa})!\,(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j^{ik}_{\ } \leq j_{ik} \leq j^{\ }_{\ } + j_{sa}^{ik} - j_{\ } \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}_{\ } + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - \ = \boldsymbol{l_{ik}} \wedge \boldsymbol{l}_{\ } j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \ = 0 \wedge$

$j_{sa}^{\ } \leq j_{sa}^{i} - 1 \wedge j_{\ }^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{\ } \cdots, j_{sa}^{ik}, j_{sa}, \cdots j_{\ }^{i}\} \wedge$

$> 3 \wedge \ s) \vee$

$(D \geq \ < n \wedge \ \ 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots \acute{a}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}-j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+j^{ik}_{sa}-j_{sa}} \sum_{(j^{sa}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}-D}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j^{ik}_{sa}+1)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{(n_i + j^{sa} + \quad - s - \quad - I)!}{(n_i - \boldsymbol{n} - \quad)! \cdot (\boldsymbol{n} + \quad + j^{ik}_{sa} \quad - j_{sa})!} \cdot
$$

$$
\frac{\quad - k - 1)!}{\quad - j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \quad)!}{(D + \quad + s - \quad - \boldsymbol{l_i} - \quad)! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + \quad \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik}_{sa} \leq j^{sa} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + \quad - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \quad \boldsymbol{n} < n \wedge I = \mathbb{k} \quad 0 \wedge$

$j_{sa} \leq j^{i}_{sa} \quad \wedge j^{ik}_{sa} = j_{s} \quad - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s} \quad j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = \quad) \vee$

$\quad n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j^{ik}_{sa} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j^{ik}_{sa} - D - s}^{\boldsymbol{l_i} + j^{ik}_{sa} - k - s + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j^{ik}_{sa})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_i + j_s + 1)}^{(\ )}
$$

$$
\sum_{n_{ik} + j_s}^{(\ )} \sum_{(n_{sa} = n_i + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{(n_i + j_{sa} + j^{ik}_{sa} - \quad - s - j_{sa})!}{(n_i - \boldsymbol{n} - I)! \cdot (\quad + j^{sa} + \quad - j_{ik} - s - j_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad \boldsymbol{l_i})!}{(D + j^{sa} + \quad - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \leq \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad j^{sa} \leq \boldsymbol{n} \quad - s$

$\boldsymbol{l_{ik}} \quad + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_i} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < \quad \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \quad - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s} : \{j^s_{sa}, \cdots, j \quad j_{sa}, \cdots, j^i_{sa}\} \wedge$

$\quad = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s} : \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j^{ik}_{sa} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j^{ik}_{sa} - D - j_{sa}}^{\boldsymbol{l_{sa}} + j^{ik}_{sa} - k - j_{sa} + 1} \sum^{(\ )} \left(j^{sa} = j_{ik} \ldots_{sa} - j^{ik}_{sa}\right)
$$

$$
\sum^{n} \sum^{(n_i - \ldots 1)} n_i - \ldots \mathbb{k} \left(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s \right.
$$

$$
\sum^{(\ )} \ldots_{ik} = n_{is} + j_s \ldots_{ik} \left(n_{sa} = n_{ik} + \ldots j^{sa} - \mathbb{k}\right)
$$

$$
\frac{\left(n_i + j^{sa} + \ldots_{ik} - j_{ik} \ldots - j_{sa} - I\right)!}{(n_i \ldots - I)! \cdot \left(\boldsymbol{n} + \ldots_{sa} + j^{ik}_{sa} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{\ldots - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(\ldots + j^{sa} + \ldots - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \ldots \boldsymbol{l_s} > D \ldots \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa} \ldots + 1 \wedge j_s \ldots j^{ik}_{sa} - \ldots \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \ldots - j^{ik}_{sa} \leq j^{sa} \ldots \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \ldots = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \ldots j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\left((D \ldots < n \wedge I \ldots \mathbb{k} = 0 \wedge\right.$

$j_{sa} \leq j^{i}_{sa} \ldots \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\ldots_{sa}, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} +$$

$$\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_{ik}}-k+1} \sum_{(\quad + j_s - j_{sa}^{ik})}$$

$$\sum_{=\boldsymbol{n}+\mathbb{k}(\quad}^{(n_i - j_s +} \sum_{=\boldsymbol{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}-\quad+j_s-j_{ik}(\quad}^{\quad} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{(\quad + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I)!}{-\boldsymbol{n}-\quad! \cdot (\boldsymbol{n} + j_{\quad} + j_{sa}^{ik} - j_{ik} - s - j_{sa})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + \quad - s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad ^{ik} + 1 = \boldsymbol{l_s} - \boldsymbol{j_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < \quad \wedge I = \mathbb{k} = 0 \wedge$

$\quad < j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=2}^{(} \sum_{-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}^{ik}-D}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-}^{(}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}\,(n_{is}}^{n} \sum_{-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+} \sum_{j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(}$$

$$\frac{(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I)!}{(n_i - I)! \cdot (\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \quad j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\quad < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{D-\boldsymbol{n}+1} \sum_{(}^{(}
$$

$$
\sum_{j_{ik}}^{\boldsymbol{l_{sa}} + j_{sa}^{ik} - k - j_{}^{}} \sum_{}^{(}
$$

$$
\sum_{n_i = \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}
$$

$$
\sum_{= n_{}^{} - j_{ik}}^{(} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\left(n_{} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \boldsymbol{n} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$j_{sa}^{ik} - 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \left(\right.$$

$$\sum_{(j_s = j_{ik} \; ; \; +1)}$$

$$\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}_{ik}-D-s}^{\boldsymbol{l_s}-k+1} \left(\right) \sum \left(-j_{sa}^{ik} \right)$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{\left(\right)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_{} - j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(\quad - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \quad < n \wedge \boldsymbol{l_s} \quad - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i} \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{} \quad j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=\cdots}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{\cdots}
$$

$$
\boldsymbol{l_s} \cdots {}^{ik} - k
$$

$$
\sum_{j_{ik}=\cdots \boldsymbol{n} + j_{sa}^{ik} - D \cdots}^{\cdots} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{\cdots}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ \ )}
$$

$$
\frac{(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I)!}{\cdots_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \cdots \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fz S_{j_s} \sum_{k=1}^{D-} \sum_{j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{s}}^{D-j_{sa}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{\quad} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)}$$

$$\sum_{\boldsymbol{l_{ik}} - \quad}^{\quad} \sum_{\boldsymbol{l_{sa}} + \boldsymbol{n} + j^{sa} - D - j_{sa}}^{(\quad)} \left(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}\right)$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{\quad} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 3 \wedge \boldsymbol{s} = s) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

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$$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z : z = 1)\big) \Rightarrow$$

$$fzS_{j_s \cdots j^{sa}} = \sum_{k=\cdots}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j_{sa}^{ik} - D - j_{sa}}^{\boldsymbol{l_s} + j_{sa}^{ik} - \cdots} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_{ik}} + \boldsymbol{n} - D}^{j_{sa}^{s} - k - s + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\quad)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$\mathcal{S}_{\dots}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_{ik}} + \boldsymbol{n} - D}^{\boldsymbol{l_{sa}} + j_{sa}^{ik} - k - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

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$$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 3 \wedge \boldsymbol{s} = s) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z : z = 1)\big) \Rightarrow$$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_{ik}} + \boldsymbol{n} - D}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}^{ik}-D-1}^{\boldsymbol{l_i}+j_{sa}^{ik}-k-s+1}\sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}\big)!}\cdot$$

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$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa}^{ik} - D - 1}^{\boldsymbol{l_{sa}} + j_{sa}^{ik} - k - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$$\sum_{j_{ik} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa}^{ik} - D - 1}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{\left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}$$

$$\frac{\left(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k)!\cdot(-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}$ $-j_{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j$ $=\boldsymbol{l_{ik}}\wedge\boldsymbol{l}$ $j_{sa}-s=$ $\wedge$

$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}=0$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge$ $\leq j_{sa}^{ik}-1$

$\boldsymbol{s}:\{j_{sa}^{s}\cdots,j_{sa}^{ik},j_{sa},$ $j_{sa}^{i}\}\wedge$

s $3\wedge\boldsymbol{s}=$ $\wedge$

$(D$ $\boldsymbol{n}<n\wedge I=$ $>0\wedge$

$j_{sa}\leq j_{sa}$ $1\wedge j_{sa}^{ik}=j_{s}$ $-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s}\cdots,j_{sa}^{i}$ $j_{sa}\}\wedge$

s $4\wedge$ $s+\mathbb{k}\wedge$

$\mathbb{k}_z:z=1)$ $\Rightarrow$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\ \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+}^{(\ )} j^{sa}-\mathbb{k})$$

$$\frac{\left(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j^{sa}-j_{sa}^{ik}-j_{ik}-j_{sa}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-1)!}{-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-)!}{(D+j^{sa}+s-\boldsymbol{n}-j_{sa})!\,(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j^{ik}\leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-=\boldsymbol{l_{ik}} \wedge \boldsymbol{l}j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I=0 \wedge\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\{\cdots,j_{sa}^{ik},j_{sa},\cdots j_{sa}\} \wedge$

$>3 \wedge s)\vee$

$(D \geq < n \wedge 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$:\{j_{sa}^{s},\cdots a,\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big) \Rightarrow$

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$$
{}_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \left(\sum_{j^{sa}=j_{ik}+j_{sa}-j}^{(\ )}\right.
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \left(\sum_{n_{is}=}^{(n_i-j_s+1)}\right.
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \left(\sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}\right.
$$

$$
\frac{\left(n_i + j^{sa} + \right.}{(n_i - \boldsymbol{n} -}\cdot
$$

$$
\frac{-k-1)!}{-j_s-1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(D-)!}{(D+ + s - \boldsymbol{l_i} -)!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}
$$

$$
D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + \wedge
$$

$$
2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq a + j_{sa}^{ik} - j_{sa} \wedge
$$

$$
j_{ik} + j_{sa} - ^{ik} \leq j^{sa} \boldsymbol{n} + j_{sa} - s \wedge
$$

$$
\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \wedge \boldsymbol{l_{sa}} + - j_{sa} \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge
$$

$$
\left((D \boldsymbol{n} < n \wedge I = \mathbb{k} 0 \wedge\right.
$$

$$
j_{sa} \leq j_{sa}^{i} \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge
$$

$$
\boldsymbol{s}: \{j j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge
$$

$$
s > 3 \wedge \boldsymbol{s} =) \vee
$$

$$
n \wedge I = \mathbb{k} > 0 \wedge
$$

$$
j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge
$$

$$
\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge
$$

$$
s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge
$$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_s}+\boldsymbol{n}-D)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right.
$$

$$
\sum_{n_i=\boldsymbol{n}+}^{n} \sum_{(}^{(}{}_{j_s+1)}
$$

$$
\sum_{n_{ik}=} \sum_{(n_{sa}=} {}^{(\ )}_{j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - s - j_{sa}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(n_{ik} + j^{sa} - j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \geq D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + \cdots \wedge j_s + j_{sa}^{ik} - 1 \cdots \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \cdots j^{sa} \leq \boldsymbol{n} \cdots j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} \cdots {}_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \cdots + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D \geq \boldsymbol{n} \cdots n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq \cdots - 1 \wedge j_{sa} \cdots j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$\cdots 3 \wedge \cdots - s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)}$$

$$\sum_{j_{ik}=j_s+j^{ik}_{sa}-1}^{(\ )} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\ )}$$

$$\sum_{(n_i=\ +1)}^{(\ )}$$

$$\sum_{n_{\ }+\mathbb{k}\,(n_{is}=\boldsymbol{n}+\mathbb{k}-j_{\ })}^{(\ )}$$

$$\sum_{n_{ik}=n_{is}+\ j_{ik}\,(n_{sa}=n_{ik}\ j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{(n_i + j^{sa} - \ ^{ik}_{\ } - j_{ik} \ \ - j_{sa} - I)!}{(n_i \ \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + \ ^{sa} + j^{ik}_{sa} - j_{ik} - s - j_{sa})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\ \ - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(\ + j^{sa} + s \ \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \ < n \wedge \boldsymbol{l_s} > \ \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - \ ^{ik} + 1 \wedge j_{\ } \ j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} \ _{sa} - j^{ik}_{sa} \leq j^{sa} \ \boldsymbol{n} + j_{sa} \ s \wedge$

$\boldsymbol{_{ik}} - j^{ik}_{sa} \ = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \ j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D > \boldsymbol{n} < n \wedge \ = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} \ \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\{j^{s} \ _{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{} \sum_{}^{} \sum_{=\boldsymbol{n}+\mathbb{k}}^{} \sum_{=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{} \sum_{n_{ik}-}^{} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{}
$$

$$
\frac{(\quad + j^{sa} + j_{sa}^{ik} - ik - s - j_{sa} - I)!}{- \boldsymbol{n} - ! \cdot (\boldsymbol{n} + j_{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} - D - \boldsymbol{n} - 1 \wedge$

$2 \leq j_{ik} - j_{sa}^{ik} + 1 \leq j_s + j_{sa}^{s} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - k + 1 = \boldsymbol{l_s} - \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < \quad \wedge I = \mathbb{k} = 0 \wedge$

$\quad - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_i}} ^{(\boldsymbol{l_s}-k+1)} \sum_{-D-s+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}} \sum_{(j^{sa}=j_{ik}+j_{sa}} ^{(} \sum_{)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}} ^{n} \sum_{} ^{(n_i-j_s+1)} \sum_{j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+} \sum_{j_{ik}} ^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \quad - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D \quad j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j \quad - j_{sa}^{ik} + 1 \wedge \quad s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \quad \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D > \quad n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(\boldsymbol{l_i} - \quad s+2)}^{} \sum_{\boldsymbol{l_{sa}}+\boldsymbol{n}-D \quad j_{sa}+1)}^{}
$$

$$
\sum_{\quad + j_{sa}^{ik}-1}^{} \sum_{(\quad j_{ik}+j_{sa}-j_{sa}^{ik})}^{}
$$

$$
\sum_{n_i \quad +\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(\quad +1)}
$$

$$
\sum_{j_{ik}=n_{is} \quad -j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{}
$$

$$
\frac{(\quad + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I)!}{(n_i - \boldsymbol{n} \quad I)! \cdot (\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \quad + 1 \wedge$

$2 \leq j \quad \leq j_{ik} - j_{sa} \quad \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad - j^{ik} \quad 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=\cdots}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-\cdots+1)}^{(\boldsymbol{l_{ik}}-k-\cdots+2)} \sum_{j_{ik}=\cdots+j_{sa}^{ik}-1}^{(\ \ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ \ )} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(\ \ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}
$$

$$
\frac{\left(n\cdots - j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(\cdots - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \cdots < n \wedge \boldsymbol{l_s} \cdots - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{\cdots} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\cdots + j_{\cdots} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s}^{(\boldsymbol{l_s}} \sum_{+\boldsymbol{n}-D-j_{sa}+1)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}
$$

$$
\frac{\boldsymbol{l}_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$< j_{sa} \leq j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, J}^{DSD} \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(\boldsymbol{s}}^{(\boldsymbol{l_i}-k-s+2)} \sum_{j_{ik}=}^{} \sum_{j_{sa}+j_{sa}^{ik}-1}^{(\quad)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{} \frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\boldsymbol{n} \ldots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz S_{j_s}^{D} {}^{j^{sa}} = \sum_{k=} \sum_{(j_s = \boldsymbol{l_{ik}} + \boldsymbol{n} - D - j_{sa}^{ik} + 1)} \sum_{j_{ik}=} \sum_{j_{sa}^{ik}-1 \, (j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 3 \wedge \boldsymbol{s} = s) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)\big) \Rightarrow$$

$${}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}}^{DSD} = \sum_{k=1}^{\boldsymbol{l_s}+1} \sum_{(j_s=\boldsymbol{l_s}+\boldsymbol{n}-D)}^{(\boldsymbol{l_i}-k-s+2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$S_{i_j}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_s}+\boldsymbol{n}-D)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_s} + \boldsymbol{n} - D)}^{(\boldsymbol{l_{ik}} - k - j_{sa}^{ik} + 2)}
$$

$$
\sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{(\ )} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\ )} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik}=$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big) \wedge$

$$fz S_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_{sa}}-k+1)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s +$

$\mathbb{k}, z = 1))$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )} \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )} $$

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$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa} + 1 > \boldsymbol{l_s} \wedge$

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$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$f_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(\boldsymbol{l_s} + j_{sa} - k)} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\ )} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik}=$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}$ [illegible] $\cdots, j_{sa}^{i}$ [illegible]

$s>4$ [illegible] $\boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big)$ [illegible]

$$fz S_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )} \sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{sa}}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s +$

$\mathbb{k} \wedge z = 1))$

$$fz S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

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$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa} + 1 > \boldsymbol{l_s} \wedge$

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$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$f_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik}=$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}$ [illegible] $\cdots, j_{sa}^{i}\}$

$s>$ [illegible] $\boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big)$ [illegible]

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right) \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s +$

$\mathbb{k}, z = 1))$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right) \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} (n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}) $$

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$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{sa}} - j_{sa} + 1 > \boldsymbol{l_s} \wedge$

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$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_{ik}, j^{sa}}^{D} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \binom{}{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \binom{}{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+j_{sa}-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik}=$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, \cdots, j_{sa}^{i}\} \wedge$

$s >$ [illegible] $\boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big)$ [illegible]

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}}\ \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}\ \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s -$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} -$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - 1) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s +$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}-j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+j^{ik}_{sa}-j_{sa}} \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j^{ik}_{sa}+1)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{(n_i + j^{sa} + \quad - s - \quad - I)!}{(n_i - \boldsymbol{n} - \quad)! \cdot (\boldsymbol{n} + \quad + j^{ik}_{sa} \quad - j_{sa})!} \cdot
$$

$$
\frac{\quad - k - 1)!}{\quad - j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \quad)!}{(D + \quad + s - \quad - \boldsymbol{l_i} - \quad)! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$$
\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge
$$

$$
2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge
$$

$$
j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge
$$

$$
\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee
$$

$$
(D \geq \quad < n \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge
$$

$$
2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \quad j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge
$$

$$
j_{ik} + \quad - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge
$$

$$
\boldsymbol{l_{ik}} - j^{ik}_{sa} + \quad > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee
$$

$$
\quad n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge
$$

$$
2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge
$$

$$
j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge
$$

$$
\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee
$$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} = \mathbb{k} = 0 \wedge$

$j_{sa}^{s} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} = \mathbb{k} > 0 \wedge$

$j_{sa}^{s} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik} + \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ \ )}$$

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$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_{sa}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+$$

$$\frac{\left(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j^{sa}+j_{sa}^{ik}-j_{ik}-\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{-k+\ !\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\ )!}{(D+j^{sa}+s-\boldsymbol{n}-\ -j_{sa})!\,(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+$ $\leq j_{ik} \leq$ $+j_{sa}^{ik}-$ $\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}$ $-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-$ $>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+$ $j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq$ $< n \wedge \boldsymbol{l_s} >$ $-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-$ $+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+$ $-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$-j_{sa}^{ik}+1>\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+$ $-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge$ $-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq$ $-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$+j_{sa}$ $\leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1>\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa}$ $\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j$ $- s = \boldsymbol{l}$ $\wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n}$ $1)) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa}$ $\wedge j_{sa}^{s} \leq j_{sa}$ $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} >$ $\wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}$ $j_{sa} -$ $j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s},$ $j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots$ $a\} \wedge$

$s > 4 \wedge \boldsymbol{s} =$ $+ \mathbb{k} \wedge$

$\mathbb{k}$ $=$ $) \Rightarrow$

$$ {}_{fZ}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ \ )} $$

$$ \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}^{(\boldsymbol{l_s} + j_{sa} - k)} $$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}$$

$$\frac{\left(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k)!\cdot(\ -2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$\big((D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}})\vee$

$(D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge\boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}\wedge$

$D+j_{sa}-\boldsymbol{n}<\boldsymbol{l_{sa}}<D+\boldsymbol{l_s}-\boldsymbol{n}-1)\big)\wedge$

$\big((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge\boldsymbol{s}=s)\vee$

$(D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge\boldsymbol{s}=s+\mathbb{k}\wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{\left(j_s = j_{ik} - j^{ik}_{sa}+1\right)}^{(\ \ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j^{ik}_{sa}-D-s}^{\boldsymbol{l_{ik}}-k+1} \sum_{\left(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa}\right.}^{(\ \ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(\quad j_s+1)}^{(\quad)}
$$

$$
\sum_{n_{ik}=} \sum_{(n_{sa}=n_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}
$$

$$
\frac{\left(n_i + j^{sa} + j^{ik}_{sa} - \quad - s - j_{sa}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \quad + j^{sa} - j_{ik} - s - j_{sa}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \quad j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad \boldsymbol{l_i})!}{(D + j^{sa} + \quad - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l}$ $> D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \leq \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad \leq j^{sa} \leq \boldsymbol{n} \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l} \quad + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} \leq D - \quad + 1 \wedge$

$1 \leq \quad \wedge j_{ik} - j_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad - 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+\cdots-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)} \sum_{j_{ik}=\boldsymbol{l_{sa}}+j_{sa}^{ik}-D-\cdots}^{\boldsymbol{l_{ik}}+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < \cdots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\cdots \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$(\quad < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}}^{\boldsymbol{l_s}+j_{sa}^{ik}-} \sum_{}^{(\ )}
$$

$$
\sum_{}^{-D-s\,(j-} \sum_{}^{+j_{sa}-j_{sa}^{ik})}
$$

$$
\sum_{}^{+1)}
$$

$$
\sum_{n_i=}^{n} \sum_{}^{\mathbb{k}\,(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{=n}^{} \sum_{}^{(\ )}
$$

$$
\sum_{}^{-j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_{} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$((D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D \quad \boldsymbol{n} + 1 \wedge$

$2 \leq \quad j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+}^{(\ \ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}\ (}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{\ \ \ \

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{z}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\cdots-j_{sa}-\cdots} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-j_{sa}^{ik}+2)}
$$

$$
\sum_{j_{ik}=\cdots}^{j_{sa}^{ik}-1} \sum^{(\ )}_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$$

$$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 3 \wedge \boldsymbol{s} = s) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)\big) \Rightarrow$$

$$fz^{S}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!}.$$

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$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

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$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{D}_{j_s,\ldots,j^{sa}} = \sum_{k=1}^{j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{} \binom{}{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{} \binom{}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}} \frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}$ [illegible] $\wedge \boldsymbol{l_i}+$ [illegible] $-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}$ [illegible] $1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq$ [illegible] $j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+$ [illegible] $-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=$ [illegible] $\wedge \boldsymbol{l_{sa}}+$ [illegible] $-j_{sa}$ [illegible] $\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$D+$ [illegible] $-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq$ [illegible] $+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1) \vee$

$(D \geq \boldsymbol{n} <$ [illegible] $\wedge \boldsymbol{l_s} \leq D-$ [illegible] $+1 \wedge$

$1 \leq j_s \leq j_{ik}-$ [illegible] $\wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-$ [illegible] $\leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

[illegible] $-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$D+j_{sa}-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, \ldots}^{DS} = \sum_{k=1}^{D+\boldsymbol{l_s}+\ldots-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} \le D - \boldsymbol{n} + 1 \wedge$

$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \le D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa}$ [illegible] $\wedge j_{sa}^{s} \le j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4$ [illegible] $\boldsymbol{s} = s + \mathbb{k}$

$\mathbb{k}$ [illegible] $z = 1)\big) =$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )} $$

$$ \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}^{(\boldsymbol{l_s} + j_{sa} - k)} $$

$$ \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} $$

$$ \sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )} $$

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$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 2 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ \ )}$$

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$$\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{\left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right)}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+}^{(\ )} {}_{-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-\right.}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j^{sa}\right.}\cdot$$

$$\frac{(\boldsymbol{l_s}$$

$$\frac{(D-$$

$$\frac{}{(D+j^{sa}+s-\boldsymbol{n}-$$

$$\left((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge\right.$$

$$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+$$

$$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}$$

$$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-$$

$$(D \geq$$

$$1 \leq j_s \leq j_{ik}-$$

$$j_{ik}$$

$$\boldsymbol{l_{ik}}-j_{sa}^{ik}$$

$$D+$$

$$\left((D \geq \boldsymbol{n} <\right.$$

$$j_s$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 3 \wedge \boldsymbol{s} = s) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

GÜLDÜNYA

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-j_{sa}^{ik}+1)}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+j_{sa}-}^{(} \sum_{(j^{sa}=j_{ik}+j_{sa}-}^{)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}\,(n_{is}}^{n} \sum_{-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+}^{( )} \sum_{j_{ik}\,(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{(n_i + j_{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I)!}{(n_i - \quad - I)! \cdot (\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \ge \quad < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \quad - j_{sa}^{ik} \le j \quad \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\quad > \quad < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

GÜLDÜNYA

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{(j_s = j_{ik} - \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{D-\boldsymbol{n}+1} \sum_{(\boldsymbol{l_i} + j_{sa} - \cdots)}^{(\quad)}
$$

$$
\sum_{j_{ik} - \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}} (j^{sa} \cdots \boldsymbol{n} + j_{sa} - D - s)}^{\quad} \sum_{(\cdots j_s + 1)}^{\quad}
$$

$$
\sum_{n_{i} \cdots + \mathbb{k} (n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{\quad} \sum_{\quad}^{(\quad)}
$$

$$
\sum_{n_{ik} = n_{is} + \cdots + j_{ik} (n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{\quad} \sum_{\quad}^{(\quad)}
$$

$$
\frac{(\cdots + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I)!}{(n_i - \boldsymbol{n} \cdots I)! \cdot (\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\geq \boldsymbol{n} < \cdots \wedge \boldsymbol{l_s} > D - \cdots + 1 \wedge$

$2 \leq j_{\cdots} \leq j_{ik} - \cdots \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} \cdots^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\cdots - j_{sa}^{ik} \cdots = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{} \sum_{} \sum_{} \sum_{} \sum_{} \sum_{} \sum_{} \sum_{} \frac{(\quad + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I)!}{(n_i - \boldsymbol{n} \quad I)! \cdot (\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa})!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \quad + 1 \wedge$

$2 \leq j \leq j_{ik} - j \quad \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} \quad {}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\quad - j_{sa}^{ik} \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum^{D-\boldsymbol{n}+1} \sum^{(\quad)} \sum_{(j_s = j_{ik} \ldots \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{(\boldsymbol{l_{ik}} + j_{sa} - k - j_s \ldots)}$$

$$\sum_{j_{ik} = j \ldots l_{sa}} \sum_{(j^{sa} = \boldsymbol{l_{ik}} \ldots + j_{sa} - D - j_{sa}^{ik})}$$

$$\ldots (\ldots + 1)$$

$$\sum^{n} \sum_{n_i \ldots \mathbb{k} (n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}$$

$$\sum \sum^{(\quad)} \sum_{\ldots = n_i \ldots - j_{ik} (n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{(\ldots + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I)!}{(n_i - \boldsymbol{n} \ldots I)! \cdot (\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < \ldots \boldsymbol{l_s} > D - \ldots + 1 \wedge$

$2 \leq \ldots j_{ik} - j_{sa} \ldots 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \ldots \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\ldots^{ik} \ldots 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \left(\right.
$$

$$
\left. (j_s = j_{ik} \quad \boldsymbol{l_{ik}}) \right.
$$

$$
\boldsymbol{l_s} + j_{sa} - k)
$$

$$
\sum_{j_{ik} = j^{sa} \quad - \boldsymbol{l_{sa}} \; (} \quad - D - 1)
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\quad)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_{i} \quad j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{\quad - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \quad < n \wedge \boldsymbol{l_s} \quad \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{sa} \quad _{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \left(\right.
$$

$$
\sum_{j_{ik}=j^{s}} \left(\right.
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_{i} - j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{\left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} = D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \binom{}{(j_s = j_{ik} \quad \boldsymbol{l_{ik}})}
$$

$$
\binom{j_{sa}-k-j_{sa}^{ik}+1}{}
$$

$$
\sum_{j_{ik}=j^{sa} \quad -\boldsymbol{l_{sa}}\,(j^{} \quad -D-s)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_{} \quad j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{-\quad - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \quad < n \wedge \boldsymbol{l_s} \quad \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$+ j_{} \quad {}_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}} \sum_{(\boldsymbol{l_{ik}} - k)}
$$

$$
\sum_{j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_s}} \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq \boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{D-\boldsymbol{n}+1}
$$

$$
(\boldsymbol{l_i} + \quad - k - s + 1)
$$

$$
\sum_{j_{ik} = j^{sa} + \quad \boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < \quad \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\quad \leq j_s \leq \quad - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}
$$

$$
+ j_{sa} - j_{sa}^{ik} + 1)
$$

$$
\sum_{j^{sa} + \boldsymbol{l_{ik}} -} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\boldsymbol{l}_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I)!}{\boldsymbol{n}_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$< j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fz^{S}_{j_s} \sum_{\quad} \sum_{(\boldsymbol{l_s}+\boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik}} \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D)}^{(\boldsymbol{l_s}+j_{sa}-k)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz^{S}_{j_s} \sum_{\quad} \sum_{(\boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{(\boldsymbol{l_i} + j_{sa} - k - s + 1)}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}}} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\boldsymbol{> n} \ldots \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\quad)}$$

$$\sum_{= j^{sa} + \boldsymbol{l_{ik}} -}^{\boldsymbol{sa} - k + 1)} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s}^{\boldsymbol{D-n+1}} {}_{j^{sa}} = \sum_{k=2}^{\boldsymbol{D-n+1}} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}^{(\boldsymbol{l_s} + j_{sa} - k)} \sum_{(j^{sa} = \boldsymbol{l_{ik}} + \boldsymbol{n} + j_{sa} - D - j_{sa}^{ik})}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}
\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}^{(\boldsymbol{l_i} + j_{sa} - k - s + 1)} \sum_{(j^{sa} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}^{(\boldsymbol{l_{sa}} - k + 1)} \sum_{(j^{sa} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}^{(\boldsymbol{l_{ik}} + j_{sa} - k - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = \boldsymbol{l_s} + \boldsymbol{n} + j_{sa} - D - 1)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \ge \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$S_{\dots}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_i} + j_{sa}^{ik} - k - s + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j_{sa}^{ik} - D - j_{sa}}^{\boldsymbol{l_{sa}} + j_{sa}^{ik} - k - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_{ik}} + \boldsymbol{n} - D}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{n}+j_{sa}^{ik}-D-1}^{\boldsymbol{l_s}+j_{sa}^{ik}-k}\sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}\big)!}\cdot$$

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$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{sa}} + j_{sa}^{ik} - k - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

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$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )} \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})} \frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s -$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} -$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I =$ $> 0 \wedge$

$j_{sa} \leq j_{sa}^{i} -$ $j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa} \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge$ $= s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \wedge$

$$_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum^{(\ )}_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})} \sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum^{(\ )}_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k)!\cdot(\ -2)!}\cdot$$

$$\frac{(D-\ )!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}\ \boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l}}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}\ _{sa}^{ik}-j_{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{\ }=\boldsymbol{l_{ik}} \wedge \boldsymbol{l}_{\ }-j_{sa}-s=\ \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0\right.$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge\ _{\ } \leq j_{sa}^{ik}-1$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \ \ j_{sa}^{i}\right\} \wedge$

$s\ \ 3 \wedge \boldsymbol{s}=\ \wedge$

$(D\ \ \boldsymbol{n} < n \wedge I=\ \ > 0 \wedge$

$j_{sa} \leq j_{sa}\ \ 1 \wedge j_{sa}^{ik}=j_{s}\ \ 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{i}\ \ j_{sa}\right\} \wedge$

$s\ \ 4 \wedge\ \ s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1) \Rightarrow$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D-\boldsymbol{n}+1}\ \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

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$$\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_i}+j_{sa}^{ik}-k-s+1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+\cdots-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - \cdots\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + \cdots + j_{sa}^{ik} - j_{ik} - \cdots\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} \cdots k - 1)!}{\cdots k + \cdots! \cdot (j_s - 2)!} \cdot$$

$$\frac{(\cdots - \boldsymbol{l_i})!}{(D + j^{sa} - \cdots - \boldsymbol{l_{sa}})! \cdots + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + \cdots \leq j_{ik} \leq \cdots + j_{sa}^{ik} - j_{\cdots} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} \cdots_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - \cdots = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} - j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I = \cdots = 0 \wedge\right.$

$j_{sa}^{s} \leq j_{sa}^{i} - 1 \wedge \cdots j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{\cdots, j_{sa}^{ik}, j_{sa}, \cdots j_{sa}^{i}\} \wedge$

$\cdots > 3 \wedge s \cdots s) \vee$

$(D \geq \cdots < n \wedge \cdots = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} \cdots \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\cdots \{j_{sa}^{s}, \cdots j_{sa}^{i}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\left.\mathbb{k}_z : z = 1\right) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j^{ik}_{sa}-D-j_{sa}}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_i})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{ik}=n_{ik}+j_{ik}-j^{sa})}^{(\ )}
$$

$$
\frac{(n_i + j^{sa} \quad j_{sa} - s - I)!}{(n_i \quad \boldsymbol{n} - I)! \cdot (\boldsymbol{n} \quad j^{sa} + j_{sa} \quad s - j_{sa})!} \cdot
$$

$$
\frac{\boldsymbol{l_{ik}} - k - 1)!}{\boldsymbol{l_{ik}} - j_s \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\boldsymbol{l_{sa}} - \boldsymbol{l_i})!}{(D + j_{sa} - \boldsymbol{n} - \boldsymbol{l_{ik}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j \quad < \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + \quad ik - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \quad \boldsymbol{n} < n \wedge I = \quad = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} \quad 1 \wedge j^{ik}_{sa} = j_{s} \quad 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s} \quad \cdots, j^{ik}_{sa}, j_{sa} \quad {}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} \quad) \vee$

$D \geq \boldsymbol{n} \quad t \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik} = \boldsymbol{l_{sa}} + \boldsymbol{n} + j^{ik}_{sa} - D - j_{sa}}^{\boldsymbol{l_s} + j^{ik}_{sa} - k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}}}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(j_s + 1)}$$

$$\sum_{n_{ik} = \quad} \sum_{(n_{sa} = \quad j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{\left(n_i + j^{sa} + j^{ik}_{sa} - s - j_{sa}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\quad + j^{sa} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D - j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \quad \wedge j_s + j^{ik}_{sa} - 1 \quad \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \quad ^{sa} \leq \boldsymbol{n} \quad _{sa} - s \wedge$

$\boldsymbol{l_{ik}} \quad ^{ik} + 1 = \boldsymbol{l_s} \wedge \quad + j^{ik}_{sa} - \quad _{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq \quad - 1 \wedge j_{sa} \quad - j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j \quad j_{sa}, \cdots, j^i_{sa}\} \wedge$

$\quad 2 \wedge \quad = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fzS^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\sum_{j_{ik} = \boldsymbol{l_{ik}} + \boldsymbol{n} - D}^{\boldsymbol{l_i} + j^{ik}_{sa} - k - s + 1} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}$$

$$\sum_{n_{ik} = n_{is} + \mathbb{k}}^{(n_i - \mathbb{k} + 1)} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_{ik})}$$

$$\sum_{n_{ik} = n_{is} + j_{ik}} \sum_{(n_{sa} = n_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{\left(n_i + j^{sa} - j_{ik} - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j^{ik}_{sa} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{ik} + 1 \wedge j_{sa} + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} - j_{sa} - j^{ik}_{sa} \leq j^{sa} - \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} - 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} - j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\left((D - \boldsymbol{n} < n \wedge \right. = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\{j^{s}_{sa}, j^{k}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_i}}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_{ik}} + \boldsymbol{n} - D}^{\boldsymbol{l_{sa}} + j_{sa}^{ik} - k - j_{sa} + 1} \sum^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{(n_i - j_s} \sum_{= \boldsymbol{n} + \mathbb{k} - j_s + 1)}
$$

$$
\sum_{n_{ik}}^{} \sum_{= n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{(\quad + j^{sa} + j_{sa}^{ik} \quad j_{ik} - s - j_{sa} - I)!}{(\quad - \boldsymbol{n} \quad)! \cdot (\boldsymbol{n} + j \quad + j_{sa}^{ik} - j_{ik} - s - j_{sa})!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(\quad + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} \quad 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad \wedge j_s + j_{sa} \quad 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} \quad {}^{ik}_{sa} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad + 1 = \quad \boldsymbol{sa} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$\quad < j^{i} \quad 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s - \cdots + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{ik}} + \cdots D\ (j^{sa} = j_{ik} + \boldsymbol{l_{sa}} \cdots)}^{\boldsymbol{l_s} + j_{sa}^{ik} - \cdots} \sum
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}\ (\cdots - j_s + 1)}^{n} \sum^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + \cdots + j_{ik}\ (n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )} \sum
$$

$$
\frac{\left(n_i + \cdots^{sa} + j_{sa}^{ik} \cdots_{ik} - s - j_{sa} - I\right)!}{(n_i - \cdots - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \ge \cdots < n \wedge \boldsymbol{l_s} > D \cdots \boldsymbol{n} + 1 \wedge$

$\cdots \le j_s \le \cdots - j_{sa}^{ik} + 1 \wedge \cdots + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + \cdots - j_{sa}^{ik} \cdots \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + \cdots = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$(D > \cdots n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{(j_s = j_{ik} \ldots \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{D-\boldsymbol{n}+1} \sum_{j_{ik} \ldots D-1}^{\boldsymbol{l_i} + j_{sa}^{ik} - k \ldots 1} \sum_{(\ldots = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\quad)} \sum_{n_i \ldots \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(\quad)} \sum_{\ldots = n_{i} \ldots - j_{ik}}^{(\quad)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{\left(\ldots + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} \ldots I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < \ldots \wedge \boldsymbol{l_s} > D - \ldots + 1 \wedge$

$2 \leq \ldots < j_{ik} - j_{sa} \ldots \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \ldots^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\ldots - j^{ik} \ldots 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \left(\right.
$$

$$
\sum_{j_{ik}=\boldsymbol{l_s}+\boldsymbol{l_{ik}}-D-1}^{\boldsymbol{l_{sa}}+j_{sa}^{ik}-k-j_{sa}+1} \left(\right.
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{\left(\right.} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_{\cdot} \cdot j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{\cdot - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \cdot < n \wedge \boldsymbol{l_s} \cdot \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{\cdot} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\cdot + j_{\cdot} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\left((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge\right.$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=} ^{D-\boldsymbol{n}+1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}} ^{k+1} \sum_{+\boldsymbol{n}+j_{sa}^{ik}-1 \ (j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ \ )}
$$

$$
\frac{\ldots_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < \ldots \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\ldots < j_s \leq \ldots_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz S_{j_s, j_{ik}}^{D\boldsymbol{s}} \sum_{k=1}^{D-\boldsymbol{n}+} \sum_{D-s+1)}^{(\boldsymbol{l_i}-k-s+2)}$$

$$\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum^{(\ )}_{j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \Bbbk > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \Bbbk, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \Bbbk \wedge$

$\Bbbk_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, J}^{DSD} \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(\quad + \boldsymbol{l_{sa}} - k - j_{sa} + 2)} \sum_{(\quad - j_{sa} + 1)} \sum_{j_{ik} (\quad + \boldsymbol{l_{ik}} - \boldsymbol{l_s} \cup j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\quad)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \Bbbk}^{n} \sum_{(n_{is} = \boldsymbol{n} + \Bbbk - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \Bbbk)}^{(\quad)}
$$

$$
\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \Bbbk = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j}^{DSD} \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s}^{(j_{ik}-k-j_{sa}^{ik}+2)} {}_{j_{sa}^{ik}+1)}
$$

$$
\sum_{j_{ik}}^{\boldsymbol{n}+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}} = \sum_{k=1}^{n+1} \sum_{(j_s = \boldsymbol{l_s} + \boldsymbol{n} - D)}^{(\boldsymbol{l_s} - k + 1)}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_{ik}} - \boldsymbol{l_s}}^{(\ )} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\ )} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}
$$

$$
\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$f_{2}^{DSD}{}_{j_{ik}, j^{sa}} \sum_{1} \sum_{(j_s = \boldsymbol{l_i} + \boldsymbol{n} - D - s + 1)} \sum_{j_{ik} = \boldsymbol{l_{ik}} - \boldsymbol{l_s}} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz^{DSD}_{j_{ik}, j^{sa}} \sum_{(j_s = \boldsymbol{l_i} + \boldsymbol{n} - D - s + 1)}^{(\boldsymbol{l_{ik}} - j_{sa}^{ik} + 2)}$$

$$\sum_{j_{ik} = \boldsymbol{l_{ik}} - \boldsymbol{l_s}}^{(\ )} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}}^{(\ )} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}$$

$$\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 3 \wedge \boldsymbol{s} = s) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)\big) \Rightarrow$$

$$fzS_{j_s,j_{ik}}^{DS} = \sum_{k=1}^{\boldsymbol{n}+1} \sum_{j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_i}-k-s+2)} \sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\ )} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 3 \wedge \boldsymbol{s} = s) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z : z = 1)\big) \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-j_{sa}} \sum_{(j_s = \boldsymbol{l_{sa}} + \boldsymbol{n} - D - j_{sa} + 1)}^{(\boldsymbol{l_{ik}} - k - j_{sa}^{ik} + 2)}$$

$$\sum_{j_{ik} = j_s + \boldsymbol{l_{ik}} - \boldsymbol{l_s}} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$\sum_{j_{ik} = j_s + \boldsymbol{l_{ik}} - \boldsymbol{l_s}} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

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$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{=1}^{D-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_{ik}} + \boldsymbol{n} - D - j_{sa}^{ik} + 1)}^{(\boldsymbol{l_i} - k - s + 2)}$$

$$\sum_{j_{ik} = j_s + \boldsymbol{l_{ik}} - \boldsymbol{l_s}} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

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$$\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

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$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s}^{D} {}_{isa} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-j_{sa}^{ik}+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)}$$

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$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$$S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{-\boldsymbol{n}+1} \sum_{(j_s = \boldsymbol{l_{ik}} + \boldsymbol{n} - D - j_{sa}^{ik} + 1)}^{(\boldsymbol{l_s} - k + 1)}$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D-\boldsymbol{n}+1} \sum_{(j_s=\boldsymbol{l_s}+\boldsymbol{n}-D)}^{(\boldsymbol{l_i}-k-s+2)}$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

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$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

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$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

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$$\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}}$

$D+s-\boldsymbol{n}<\boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}$ $\wedge j_{sa}^{s} \leq j_{sa}^{ik}$ $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>3$ $\boldsymbol{s}=s) \vee$

$(\boldsymbol{n} \geq \boldsymbol{n} < n \wedge$ $= \mathbb{k} >$

j_{sa} $j_{sa}^{i}-1 \wedge j_{sa}^{ik}$ $j_{sa}-1 \wedge$ $\leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s$ $\wedge$

$\mathbb{k}_z, z=1)\big) \Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}}\ \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ \ )}$$

$$\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}\ \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_{sa}}-k+1)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1}{(\boldsymbol{l_s} - j_s - k)! \cdot (\quad - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l} - j_{sa})! \cdot (\boldsymbol{n} - j_{sa} - j^{sa} -}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j^{ik}_{sa}+1)}
$$

$$
\sum_{n_i=\boldsymbol{n}+} \sum_{(\boldsymbol{n}+}^{(} j_s+1)
$$

$$
\sum_{n_{ik}=} \sum_{(n_{sa}=} j_{ik}-j^{sa}-\mathbb{k})^{(\ )}
$$

$$
\frac{\left(n_i + j^{sa} + j^{ik}_{sa} - j_{ik} - s - j_{sa}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} - j^{ik}_{sa} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D + \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \wedge j_s + j^{ik}_{sa} - 1 \leq \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq \boldsymbol{n} - s$

$\boldsymbol{l_{ik}} - j^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \wedge \boldsymbol{l_s} \leq D - + 1 \wedge$

$1 \leq \leq j_{ik} - j_{sa} \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$- j^{ik} 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{j_{ik}} \sum_{+j_{sa}^{ik}-j_{sa}} \sum_{=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(\boldsymbol{l_i} - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$\quad ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

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$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \le D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$)_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$\mathcal{S}_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}}\ \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}\ \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_s}+j_{sa}-k)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}\big)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$\mathcal{S}^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}\big)!}\cdot$$

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$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} \quad \wedge j_{sa}^{s} \leq j_{sa}^{ik} \quad \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(\quad \geq \boldsymbol{n} < n \wedge \quad = \mathbb{k} > 0 \wedge$

$j_{sa} \quad j_{sa}^{i} - 1 \wedge j_{sa}^{ik} \quad j_{sa} - 1 \wedge \quad \leq j_{sa}^{ik} - 1 \wedge$

$\quad : \{j_{sa}^{s}, \cdots \quad {}_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, \quad {}_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s \quad \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1) \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D + \boldsymbol{l_s} + s - \boldsymbol{n} - \boldsymbol{l_i}} \quad \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ \ )}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \quad \sum_{(j^{sa} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa} - D - s)}^{(\boldsymbol{l_s} + j_{sa} - k)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}\right)}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k}\cdot$$

$$\frac{(D-\boldsymbol{l_i})}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_s}-j_{sa})!\cdot(\boldsymbol{n}-j_{sa}-j^{sa}-}$$

$D\geq\boldsymbol{n}<n\wedge\boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq\boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1>\boldsymbol{l_s}\wedge\boldsymbol{l_{sa}}+j_{sa}^{ik}-j$

$\left((D\geq\boldsymbol{n}<n\wedge I=\mathbb{k}=0\right.$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge$

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\right.$

s

$(D$

j_{sa}

$\boldsymbol{s}:\left\{j_{sa}^{s},\cdots,j_{sa}^{i}\right.$

s

$\mathbb{k}_z:z=1)$

$$_{fz}S_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}}\ \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

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$$\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+\quad-j^{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} \quad j_{sa} - \quad\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} \quad j_{sa}^{ik} - j_{ik} \quad j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} \quad k - 1)!}{\quad - k + \quad)! \cdot (j_s - 2)!}$$

$$\frac{\quad - \boldsymbol{l_i})!}{(D + j^{sa} \quad - \boldsymbol{l_{sa}}) \quad (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j^{ik} \quad \leq j_{ik} \leq \quad + j_{sa}^{ik} - j \quad \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} \quad j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} \quad = \boldsymbol{l_{ik}} \wedge \boldsymbol{l} \quad j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \quad < n \wedge \boldsymbol{l_s} \leq \quad - \boldsymbol{n} + 1 \wedge$

$1 \quad j_s \leq j_{ik} - \quad + 1 \wedge \quad + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} \quad j_{sa} - j_{sa}^{ik} \leq j \quad \leq \boldsymbol{n} + j_{sa} \quad \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} - 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} \quad j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \quad \quad D \quad \boldsymbol{s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} \quad \wedge I = \mathbb{k} = 0 \wedge$

$\quad \leq j_{sa}^{i} \quad 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} +} \sum_{(\boldsymbol{l_s}+ \quad -k)} \sum_{j_{ik} = j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{\quad n+j_s \quad D-s)} \sum_{(n_i - j_s} \sum_{n_i = \boldsymbol{n}+\mathbb{k}} \sum_{\quad = \boldsymbol{n}+\mathbb{k}-j_s+1)} \sum_{n_{ik}} \sum_{\quad + j_s - j_{ik}} \sum_{\quad = n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(+ j^{sa} + j_{sa}^{ik} \quad _{ik} - s - j_{sa} - I\right)!}{\quad - \boldsymbol{n} \quad)! \cdot \left(\boldsymbol{n} + j \quad + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + \quad s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\left((D \geq \boldsymbol{n} < n \wedge \quad > D - \quad + 1 \wedge\right.$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad ^{ik} + 1 = \boldsymbol{l_s} \quad \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \quad \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$\quad j \quad _{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$\left.D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\right) \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$fz S_{j_s \cdots j^{sa}} = \sum_{1} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}$$

$$\boldsymbol{l_{sa}} + j_{s} \cdots - j_{sa} + 1 \qquad \sum_{} \qquad \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}$$

$$j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} \cdots - D - s \qquad \sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$$

$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$$

$$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$$

$$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$$

$$s > 3 \wedge \boldsymbol{s} = s) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$$

$$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z : z = 1)) \Rightarrow$$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

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$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa}$ $\wedge j_{sa}^{s} \leq j_{sa}^{ik}$ $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3$ $\wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge$ $= \mathbb{k} >$

j_{sa} $j_{sa}^{i} - 1 \wedge j_{sa}^{ik}$ $j_{sa} - 1 \wedge$ $\leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s$ $\wedge$

$\mathbb{k}_z, z = 1)$ $\Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_{ik}} - k + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k)!\cdot(\ -2)!}\cdot$$

$$\frac{(D-\ )!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}\ \boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i}}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 \neq \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s > \boldsymbol{l_{sa}} \wedge$

$D+s-\boldsymbol{n} < \boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-(\ -1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s+\mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j^{ik}_{sa}-D-s}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa}}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+}^{n} \sum_{\boldsymbol{n}+}^{(\ j_s+1)}
$$

$$
\sum_{n_{ik}=} \sum_{(n_{sa}=}^{(\ )}
$$

$$
\frac{\left(n_i + j^{sa} + j^{ik}_{sa} - j_{ik} - s - j_{sa}\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} - j^{ik}_{sa} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D + \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \wedge j_s + j^{ik}_{sa} - 1 \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} - j^{sa} \leq \boldsymbol{n} - j_{sa} - s$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$(D \geq \boldsymbol{n} \wedge I = \mathbb{k} =$ $\wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j_{sa} - j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j_{sa}, \cdots, j^i_{sa}\} \wedge$

$3 \wedge$ $= s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^i_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^s_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^s_{sa}, \cdots, j^{ik}_{sa}, \mathbb{k}, j_{sa}, \cdots, j^i_{sa}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j^{ik}_{sa}-D-s}^{\boldsymbol{l_s}+j^{ik}_{sa}-k} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{n_i=\mathbb{k}}^{(n_i-\mathbb{k}-1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s)}^{(\ )}
$$

$$
\sum_{n_{ik}=n_{is}+j_{ik}}^{(\ )} (n_{sa}=n_{ik}-j^{sa}-\mathbb{k})
$$

$$
\frac{\left(n_i + j^{sa} + j_{ik} - j_{ik} - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j^{ik}_{sa} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{ik} + 1 \wedge j_{sa} - j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} + \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + j_{sa} = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} - j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\{s, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_i}}^{(\ \ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum^{(\ \ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+} \sum_{(\ \ =\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}}^{+j_s-j_{ik}} \sum_{(\ \ =n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(\ \ + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{-\boldsymbol{n}-\ \ ! \cdot \left(\boldsymbol{n} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(\ \ + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \ \ > D - \boldsymbol{l_s} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \ \ \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$\ \ \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s \cdots j^{sa}} = \sum_{(j_s = j_{ik} + \boldsymbol{l_s} - \boldsymbol{l_{ik}})}^{(\quad)}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + \mathbb{k} - D - s}^{\boldsymbol{l_s} \cdots - k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\quad)}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\quad)}
$$

$$
\frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$$

$$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 3 \wedge \boldsymbol{s} = s) \vee$$

$$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$$

$$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$$

$$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z : z = 1)\big) \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{s}}^{DSD} = \sum_{k=1}^{D+\cdots s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_s} + j_{s}^{i} \cdots k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}
$$

$$
\sum_{j_{ik} = \boldsymbol{l_i} + \boldsymbol{n} + j_{sa}^{ik} - D - s}^{\boldsymbol{l_s} + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + \boldsymbol{l_{sa}} - \boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}
$$

$$
\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}
$$

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$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \vee$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa} \leq j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} > s + \mathbb{k} \wedge$

$\mathbb{k}_z . z = 1)\big) \Rightarrow$

$$_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{sa}}-k-j_{sa}+2)}$$

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$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\ )} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+\quad-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}\quad -j_{sa}-1\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j^{sa}\quad j_{sa}^{ik}-j_{ik}\quad -j_{sa}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}\quad k-1)!}{\quad -k+1)!\cdot(j_s-2)!}$$

$$\frac{(D\quad 1)!}{(D+j^{sa}+s-\boldsymbol{n}\quad -j_{sa})!\,(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j^{ik}\quad \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j\quad \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+\quad -j_{sa}=\boldsymbol{l_{ik}}\quad +j_{sa}-s>\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}\quad 1 \wedge j_s+j_{sa}^{ik}-1\quad j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\quad j^{sa} \leq \boldsymbol{l}\quad j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}\quad j_{sa}^{ik}+1=\boldsymbol{l_s}\quad +j_{sa}^{ik}\quad =\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}} \wedge$

$D+s-\quad \leq \boldsymbol{l_i} \leq D+\quad +s-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge \quad 0 \wedge$

$j_{sa} \leq j_{sa}^{i}\quad 1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, \quad a, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

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$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j^{ik}_{sa}+2)}
$$

$$
\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(} \sum_{(j^{sa}=j_{i}}^{)} \sum_{\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}
$$

$$
\sum_{(n_i-}^{(n_i} \sum_{+1)}
$$

$$
\sum_{n_{i}+\mathbb{k}\,(n_{is}=\boldsymbol{n}+\mathbb{k}-j_{s}}
$$

$$
\sum_{n_{ik}=n_{is}+}^{(} \sum_{j_{ik}\,(n_{sa}=n_{ik}} \sum_{j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_i + j^{sa} - \right.}{(n_i} \frac{\left. - j_{ik} - j_{sa} - I\right)!}{\boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + \right.} \frac{}{sa} + j^{ik}_{sa} - j_{ik} - s - j_{sa}\Big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(} \frac{}{j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s} \frac{}{\boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_s - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_s - j^{ik}_{sa} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

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$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$\sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-} \sum_{(D-s+1)}^{\left(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2\right)} \sum_{j_{ik}=} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(\quad)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\boldsymbol{l_{ik}} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}}) \vee$

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$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s > \boldsymbol{l_{sa}} \wedge$

$D + s - \boldsymbol{n} < \boldsymbol{l_i} \leq D + \boldsymbol{l_s} + s - \boldsymbol{n} - 1)) \wedge$

$((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fz\boldsymbol{S}_{j_{ik}, j^{sa}}^{D} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$f_{\boldsymbol{n},\boldsymbol{l_s},s,j_{ik},j^{sa}}^{D} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \frac{\big(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}\big)!} \cdot \frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}+s-\boldsymbol{n}-\boldsymbol{l_i}-j_{sa})!\cdot(\boldsymbol{n}+j_{sa}-j^{sa}-s)!}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}\colon \{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z\colon z=1)\big) \Rightarrow$

$$f_{j_s,j_{ik},j^{sa}}^{SD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\big(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}-I\big)!}{(n_i-\boldsymbol{n}-I)!\cdot\big(\boldsymbol{n}+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}\big)!}\cdot$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s>\boldsymbol{l_{sa}})\vee$

$(D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge$

$D+s-\boldsymbol{n}<\boldsymbol{l_i}\leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)\vee$

$\big((D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3\wedge \boldsymbol{s}=s)\vee$

$(D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}>0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}-1\wedge j_{sa}^{s}\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>4\wedge \boldsymbol{s}=s\wedge\mathbb{k}\wedge$

$\mathbb{k}_z:z=1\big)\Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}}\ \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}\ \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1}{(\boldsymbol{l_s} - j_s - k)! \cdot (\quad - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} + s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} - j_{sa} - j^{sa} -}$$

$D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa}$ $_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j$ $= \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}$ $j_{sa} - s =$ $\wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge$ $_s \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa},$ $j_{sa}^{i}\} \wedge$

s $3 \wedge \boldsymbol{s} =$ $\wedge$

$(D$ $\boldsymbol{n} < n \wedge I =$ $> 0 \wedge$

$j_{sa} \leq j_{sa}$ $1 \wedge j_{sa}^{ik} = j_{s}$ $1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{i}$ $j_{sa}\} \wedge$

s $4 \wedge$ $s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1) \Rightarrow$

$$_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\ )} \left(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}}\right)$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \left(n_{sa}=n_{ik}+\ -j^{sa}-\mathbb{k}\right)$$

$$\frac{\left(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-\ -1\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j^{sa}+j_{sa}^{ik}-j_{ik}-\ -j_{sa}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}\ -k-1)!}{\ -k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(\ -\boldsymbol{l_i})!}{(D+j^{sa}-\ -\boldsymbol{l_{sa}})!\left(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i}\right)!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+\ \leq j_{ik} \leq\ +j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}\ -s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-\ =\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}\ j_{sa}-s > \boldsymbol{l_{sa}}) \vee$

$(D \geq\ < n \wedge \boldsymbol{l_s} \leq\ -\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-\ +1 \wedge\ +j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}\ _{sa}-j_{sa}^{ik} \leq j^{\ } < \boldsymbol{n}+j_{sa}\ s \wedge$

$\boldsymbol{\ }-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}\ j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge$

$D+s-\boldsymbol{n} < \boldsymbol{l_i} \leq D+\boldsymbol{l_s}+s-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n}\ \wedge I=\mathbb{k}=0 \wedge$

$<j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+s-\boldsymbol{n}-\boldsymbol{l_i}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+} \sum_{j_{ik}=j_s+j_{sa}^{ik}} \sum_{=j_{ik}+} \sum_{(n_i-j_s} \sum_{=\boldsymbol{n}+\mathbb{k}} \sum_{=\boldsymbol{n}+\mathbb{k}-j_s+1)} \sum_{n_{ik}} \sum_{+j_s-j_{ik}} \sum_{=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(\boldsymbol{n} - \boldsymbol{n} - 1)! \cdot \left(\boldsymbol{n} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j_{sa} - s - \boldsymbol{n} - \boldsymbol{l_i} - j_{sa})! \cdot (\boldsymbol{n} + j_{sa} - j^{sa} - s)!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \quad > D - \quad + 1 \wedge$

$2 \leq \quad \leq j_{ik} - j_{sa}^{ik} + \quad \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \quad ^{ik} \leq j^{sa} \leq \quad + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - \quad ^{ik} + 1 = \boldsymbol{l_s} - \boldsymbol{sa} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$\quad \leq j \quad ^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

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$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DS\cdots}_{j_s, j_{ik}\cdots z} = \sum_{k=1}^{(\boldsymbol{l_s}+j_{sa}-\boldsymbol{l_{ik}})} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\boldsymbol{l_i}-j_{sa}-k-j_{sa}^{ik}+1)} \sum_{j_{ik}=j^{sa}+j_{sa}}^{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}
$$

$$
\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

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$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$\mathcal{D}_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\boldsymbol{l_{ik}}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D)} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!}.$$

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$$\frac{(\boldsymbol{l_s}-k-1)!}{(\boldsymbol{l_s}-j_s-k+1)!\cdot(j_s-2)!}\cdot$$

$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}>D-\boldsymbol{n}+1\wedge$

$2\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}})\vee$

$(D\geq \boldsymbol{n}<n\wedge \boldsymbol{l_s}\leq D-\boldsymbol{n}+1\wedge$

$1\leq j_s\leq j_{ik}-j_{sa}^{ik}+1\wedge j_s+j_{sa}^{ik}-1\leq j_{ik}\leq j^{sa}+j_{sa}^{ik}-j_{sa}\wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik}\leq j^{sa}\leq \boldsymbol{n}+j_{sa}-s\wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s}\wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}>\boldsymbol{l_{ik}}\wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}$

$D+j_{sa}-\boldsymbol{n}<\boldsymbol{l_{sa}}\leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)\big)\wedge$

$\big((D\geq \boldsymbol{n}<n\wedge I=\mathbb{k}=0\wedge$

$j_{sa}\leq j_{sa}^{i}-1\wedge j_{sa}^{ik}=j_{sa}$ $\wedge j_{sa}^{s}\leq j_{sa}^{ik}$ $\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\}\wedge$

$s>3$ $\boldsymbol{s}=s)\vee$

$(\quad\geq \boldsymbol{n}<n\wedge$ $=\mathbb{k}>$

j_{sa} $j_{sa}^{i}-1\wedge j_{sa}^{ik}$ $j_{sa}-1\wedge$ $\leq j_{sa}^{ik}-1\wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,$ $\}\wedge$

$s>4\wedge \boldsymbol{s}=s$ $\wedge$

$\mathbb{k}_z,z=1)\big)\Rightarrow$

$$fzS_{j_s,j_{ik},j^{sa}}^{DSD}=\sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}}\ \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ \ )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}\ \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s)}^{(\boldsymbol{l_s}+j_{sa}-k)}$$

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$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n}\ \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}}\ \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ \ )}$$

$$\frac{\left(n_i+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}-I\right)!}{(n_i-\boldsymbol{n}-I)!\cdot\left(\boldsymbol{n}+j^{sa}+j_{sa}^{ik}-j_{ik}-s-j_{sa}\right)!}\cdot$$

$$\frac{(\boldsymbol{l_s}-k-1}{(\boldsymbol{l_s}-j_s-k)!\cdot(\ -2)!}\cdot$$

$$\frac{(D-\ )!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}-\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i}}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1 \leq \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa}=\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$D+j_{sa}-\boldsymbol{n}<\boldsymbol{l_{sa}}<D+\boldsymbol{l_s}-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}>0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}-1 \wedge$

$\boldsymbol{s}:\{j_{sa}^{s},\cdots,j_{sa}^{ik},\mathbb{k},j_{sa},\cdots,j_{sa}^{i}\} \wedge$

$s>4 \wedge \boldsymbol{s}=s+\mathbb{k} \wedge$

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$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$
{}_{fz}S^{DSD}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}}^{(\boldsymbol{l_s}+j_{sa}-k)} \sum_{(j^{sa}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}-D-s}
$$

$$
\sum_{n_i=\boldsymbol{n}+}^{n} \sum_{(\ \ j_s+1)}^{\boldsymbol{n}+} \ \ j_s+1)
$$

$$
\sum_{n_{ik}=} \sum_{(n_{sa}=}^{(\ )} j_{ik}-j^{sa}-\mathbb{k})
$$

$$
\frac{\big(n_i + \ ^{sa} + j^{ik}_{sa} \ \ _{ik} - s - j_{sa}\big)!}{(n_i - \boldsymbol{n} - I)! \ \ + j^{sa} \ \ ^{ik}_{sa} - j_{ik} - s - j_{sa}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} \ \ j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{\ \ ) - \boldsymbol{l_i})!}{(D \ \ j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l} > D - \boldsymbol{n} + 1$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + \ \wedge j_s + j^{ik}_{sa} - 1 \ \ \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \ \ ^{sa} \leq \boldsymbol{n} \ \ _{sa} - s$

$\boldsymbol{l_{ik}} \ \ ^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l} \ \ + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < \ \ \wedge \boldsymbol{l_s} \leq D - \ \ + 1 \wedge$

$1 \leq j \ \ < j_{ik} - j_{sa} \ \ \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - \ ^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\ \ - j^{ik} \ \ 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

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$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+\boldsymbol{l_{sa}}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\quad j_{sa}-k)} \sum_{j_{ik}=j^{sa}+j_{sa}}^{\quad} \sum_{(j^{sa}=\boldsymbol{l_{sa}}+\boldsymbol{n}-D)}^{} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < \quad \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$< j \quad {}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

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$1 \le j_s \le j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \le j_{ik} \le j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fz^{SD}_{j_{ik}, j^{sa}} = \sum_{k=1}^{j_s + j_{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )}$$

$$\sum_{j_{ik} = j^{sa} + \boldsymbol{l_{ik}} - \boldsymbol{l_{sa}}}^{(\boldsymbol{l_s} + j_{sa} - k)} \sum_{(j^{sa} = \boldsymbol{l_{sa}} + \boldsymbol{n} - D)}$$

$$\sum_{n_i = \boldsymbol{n} + \mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik}} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(D-\boldsymbol{l_i})!}{(D+j^{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}})!\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}+1 \wedge$

$2 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D-\boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$

$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j_{sa}^{ik}+1=\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j_{sa}^{ik}-j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}$ [illegible] $\wedge$

$D+j_{sa}-\boldsymbol{n} < \boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j_{sa}^{i}-1 \wedge j_{sa}^{ik}=j_{sa}-1 \wedge j_{sa}^{s} \leq j_{sa}^{ik}$ [illegible] $\wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s}=s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I$ [illegible] $\mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}$ [illegible] $\wedge j_{sa}^{ik}=$ [illegible] $-1 \wedge j_{sa}^{s} \leq j_{sa}$ [illegible] $1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s >$ [illegible] $\boldsymbol{s}=s+\mathbb{k} \wedge$

$\mathbb{k}_z: z=1)\big) \wedge$

$$fz S_{j_s,j_{ik},j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s -$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} -$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - 1) \wedge$

$\big(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s +$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j^{ik}_{sa}-D-j_{sa}}^{\boldsymbol{l_{ik}}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik}_{sa})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=n_i+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(j_{ik}=n_{ik}+j_{ik}-j^{sa})}^{(\ )}
$$

$$
\frac{\left(n_i + j^{sa} \quad j_s - s \quad - I\right)!}{(n_i \quad \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} \quad j^{sa} + j_{sa} \quad j_s - j_{sa}\right)!} \cdot
$$

$$
\frac{\boldsymbol{l_{ik}} - k - 1)!}{j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad - \boldsymbol{l_i})!}{(D + \quad - \boldsymbol{n} - \boldsymbol{l} \quad)! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{l} \quad 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \quad 1 \leq j_{ik} \leq \quad a + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \leq j^{s} \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \quad \wedge \boldsymbol{l_{sa}} + \quad ik - j_{sa} \quad \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq \quad \boldsymbol{n} + 1$

$1 \leq j_s \leq \quad - j^{ik}_{sa} + 1 \wedge \quad s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \quad - j^{ik}_{sa} \quad \quad \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \quad = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\quad + j_{sa} \quad < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}}^{(\quad)} \sum_{(j_s=j_{ik}\quad \boldsymbol{l_{ik}})}^{(\quad)}
$$

$$
\sum_{\boldsymbol{l}+j_{sa}^{ik}-k}^{(\quad)} \sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}\quad_{ik}-D-s\ (\quad -j_{sa}^{ik})}^{(\quad)}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(\quad)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\quad)}
$$

$$
\frac{\left(n_{\quad} - j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(\quad - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \quad < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i} \quad j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$S_{j_s, j_{ik}, \ldots}^{DSL} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )} \sum_{j_{ik}=\boldsymbol{l_i}+\boldsymbol{n}+j_{sa}^{ik}-D-s}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{s} \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = \mathbb{k} \wedge$

$\mathbb{k}_z = 1)\big) \Rightarrow$

$$fzS_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik}+\boldsymbol{l_s}-\boldsymbol{l_{ik}})}^{(\ )}$$

$$\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j_{sa}^{ik}-D-j_{sa}}^{\boldsymbol{l_s}+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s -$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} -$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - 1) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s +$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}-j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{sa}}+\boldsymbol{n}+j^{ik}_{sa}-D-j_{sa}}^{\boldsymbol{l_s}+j^{ik}_{sa}-k} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{=n_{ik}+j_{ik}-j^{sa}}^{(\ )}
$$

$$
\frac{\left(n_i+j^{sa}-\right.\ -s-\ -I\right)!}{(n_i-\boldsymbol{n}-\ )!\cdot\left(\boldsymbol{n}+\ ^{sa}+j^{ik}_{sa}-\ -j_{sa}\right)!}\cdot
$$

$$
\frac{\ -k-1)!}{-j_s-\ +1)!\cdot(j_s-2)!}\cdot
$$

$$
\frac{(\ -\boldsymbol{l_i})!}{(D+\ -\boldsymbol{n}-\boldsymbol{l}\ !\cdot(\boldsymbol{n}+\boldsymbol{l_{sa}}-j^{sa}-\boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D-\boldsymbol{n}\ -1 \wedge$

$2 \leq j_s \leq j_{ik}-j^{ik}_{sa}+1 \wedge j_s+j^{ik}_{sa}-1 \leq j_{ik} \leq\ ^{sa}+j^{ik}_{sa}-j_{sa} \wedge$

$j_{ik}+j_{sa}-\ ^{ik}_{sa} \leq j^{sa}\ \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j^{ik}_{sa}+1=\ \wedge \boldsymbol{l_{sa}}+j\ -j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}}) \vee$

$(D \geq\ <n \wedge \boldsymbol{l_s} \leq D\ \boldsymbol{n}+1 \wedge$

$1 \leq j_s \leq j_{ik}-j^{ik}_{sa}+1 \wedge j_s+j^{ik}_{sa}-1 \leq j_{ik} \leq j^{sa}+j^{ik}_{sa}-j_{sa} \wedge$

$j_{ik}+\ -j^{ik}_{sa} \leq j^{sa}\ \leq \boldsymbol{n}+j_{sa}-s \wedge$

$\boldsymbol{l_{ik}}-j^{ik}_{sa}+\ =\boldsymbol{l_s} \wedge \boldsymbol{l_{sa}}+j^{ik}_{sa}-j_{sa}>\boldsymbol{l_{ik}} \wedge \boldsymbol{l_i}+j_{sa}-s=\boldsymbol{l_{sa}} \wedge$

$\ \boldsymbol{n}<\boldsymbol{l_{sa}} \leq D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I=\mathbb{k}=0 \wedge$

$j_{sa} \leq j^{i}_{sa}-1 \wedge j^{ik}_{sa}=j_{sa}-1 \wedge j^{s}_{sa} \leq j^{ik}_{sa}-1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa},\cdots,j^{ik}_{sa},j_{sa},\cdots,j^{i}_{sa}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-1)}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\quad)} \sum \quad -j_{sa}^{ik})
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_{\quad} - j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(\quad - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \quad < n \wedge \boldsymbol{l_s} \quad D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{i} \quad j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \le j^{sa} \le \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \le D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)) \wedge$

$((D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \ge \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \le j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \le j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)) \Rightarrow$

$$fz^{\sum_{j_s=D}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{l_{sa}}}} \sum_{k=1}^{(\boldsymbol{l_{ik}}-k-j_{sa}^{ik}+2)} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}$$

$$\sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}} \sum^{(\ )}_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I)!}{(n_i - \boldsymbol{n} - I)! \cdot (\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa})!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{s} \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = \mathbb{k} \wedge$

$\mathbb{k}_z = 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+\boldsymbol{l_{ik}}-\boldsymbol{l_s}}^{(\ )} \left(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}\right) \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \left(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1\right)^{(n_i-j_s+1)} $$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - 1) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_i}+\boldsymbol{n}-D-s+1)}^{(\boldsymbol{l_s}-k+1)}
$$

$$
\sum_{j_{ik}=j_s+j^{ik}_{sa}-1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_i})}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{ik}+j_{ik}-j^{sa})}^{(\ )}
$$

$$
\frac{\left(n_i + j^{sa} \quad j_{ik} - s - \quad - I\right)!}{(n_i \quad \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} \quad {}^{sa} + j_{sa} \quad j_{ik} - j_{sa}\right)!} \cdot
$$

$$
\frac{\boldsymbol{l_s} - k - 1)!}{\boldsymbol{l_s} - j_s - \quad + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\quad - \boldsymbol{l_i})!}{(D + \quad - \boldsymbol{n} - \boldsymbol{l} \quad)! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} + \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j^{ik}_{sa} \leq j^{sa} + \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 = \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} > \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}}^{(\quad)} \sum_{+\boldsymbol{l_{ik}}-\boldsymbol{l_s}\ (\quad -j_{sa}^{ik})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\left(n_{\quad} j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{\quad - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D > \boldsymbol{n} < n \wedge \quad - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{\quad} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$\quad + j_{\quad} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

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$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa} - \boldsymbol{n} < \boldsymbol{l_{sa}} \leq D + \boldsymbol{l_s} + j_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

$$fz^{\sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{sa}}+\boldsymbol{n}-D-j_{sa}+1)}^{(\boldsymbol{l_s}-k+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-\boldsymbol{l_{ik}})}^{(\ )} \sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}^{(\ )} \frac{\big(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(n_i - \boldsymbol{n} - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot \frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

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$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j_{sa}^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge$ $\leq j_{sa}^{ik} - 1$

$\boldsymbol{s}: \{j_{s}^{s}$ $\cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}$ $, j_{sa}^{i}\} \wedge$

s $4 \wedge \boldsymbol{s} = s$ $\mathbb{k} \wedge$

$\mathbb{k}_z$ $= 1)\big) \Rightarrow$

$$ {}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s = j_{ik} - j_{sa}^{ik}+1)}^{(\ )} $$

$$ \sum_{j_{ik} = j^{sa}+\boldsymbol{l_{ik}}-\boldsymbol{l_{sa}}} \sum_{(j^{sa} = \boldsymbol{l_{ik}}+\boldsymbol{n}+j_{sa}-D-j_{sa}^{ik})}^{(\boldsymbol{l_s}+j_{sa}-k)} $$

$$ \sum_{n_i = \boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is} = \boldsymbol{n}+\mathbb{k}-j_s+1)}^{(n_i - j_s+1)} $$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum^{(\ )}_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}$$

$$\frac{\left(n_i + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\right)!}{(n_i - \boldsymbol{n} - I)! \cdot \left(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\right)!} \cdot$$

$$\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 1)!}$$

$$\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n} + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \vee$

$(D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} \leq D - \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j_{sa}^{ik} + 1 > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j_{sa}^{ik} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$D + j^{ik} - \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j_{sa}^{ik} - 1) \wedge$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 3 \wedge \boldsymbol{s} = s$

$(D \geq \boldsymbol{n} < \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_z : z = 1)\big) \Rightarrow$

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$$
{}_{fz}S^{DSD}_{j_s,j_{ik},j^{sa}} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=j_{ik}-j^{ik}_{sa}+1)}^{(\ )}
$$

$$
\sum_{j_{ik}=\boldsymbol{l_{ik}}+\boldsymbol{n}-D}^{\boldsymbol{l_s}+j^{ik}_{sa}-k} \sum_{(j^{sa}=j_{ik}+\boldsymbol{l_{sa}}-}^{(\ )}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{n} \sum_{(n_{is}=}^{(n_i-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{=n_{ik}+j_{ik}-j^{sa}}
$$

$$
\frac{\left(n_i + j^{sa} - \right)!}{(n_i - \boldsymbol{n} -)! \cdot \left(\boldsymbol{n} + j_{sa} + j_{sa} - \right)!} \cdot
$$

$$
\frac{ - k - 1)!}{ - j_s - + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(\ - \boldsymbol{l_i})!}{(D + \ - \boldsymbol{n} - \boldsymbol{l}\ )! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

$\big((D \geq \boldsymbol{n} < n \wedge \boldsymbol{l_s} > D - \boldsymbol{n}\ 1 \wedge$

$2 \leq j_s \leq j_{ik} - j^{ik}_{sa} + 1 \wedge j_s + j^{ik}_{sa} \ 1 \leq j_{ik} \leq \ ^{a} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \ _{sa} - j^{ik}_{sa} \leq j^{sa} \ \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + 1 > \ \wedge \boldsymbol{l_{sa}} + \ ^{ik} - j_{sa} \ \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}}) \vee$

$(D \geq \ < n \wedge \boldsymbol{l_s} \leq \ \boldsymbol{n} + 1 \wedge$

$1 \leq j_s \leq \ - j^{ik}_{sa} + 1 \wedge \ _s + j^{ik}_{sa} - 1 \leq j_{ik} \leq j^{sa} + j^{ik}_{sa} - j_{sa} \wedge$

$j_{ik} + \ - j^{ik}_{sa} \leq \ \leq \boldsymbol{n} + j_{sa} - s \wedge$

$\boldsymbol{l_{ik}} - j^{ik}_{sa} + \ > \boldsymbol{l_s} \wedge \boldsymbol{l_{sa}} + j^{ik}_{sa} - j_{sa} = \boldsymbol{l_{ik}} \wedge \boldsymbol{l_i} + j_{sa} - s = \boldsymbol{l_{sa}} \wedge$

$\ ^{ik} \boldsymbol{n} < \boldsymbol{l_{ik}} \leq D + \boldsymbol{l_s} + j^{ik}_{sa} - \boldsymbol{n} - 1)\big) \wedge$

$\big((D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa} \leq j^{i}_{sa} - 1 \wedge j^{ik}_{sa} = j_{sa} - 1 \wedge j^{s}_{sa} \leq j^{ik}_{sa} - 1 \wedge$

$\boldsymbol{s}: \{j^{s}_{sa}, \cdots, j^{ik}_{sa}, j_{sa}, \cdots, j^{i}_{sa}\} \wedge$

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1000 $D > \boldsymbol{n} < n$

$s > 3 \wedge \boldsymbol{s} = s) \vee$

$(D \geq \boldsymbol{n} < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{s} \leq j_{sa}^{ik} - 1 \wedge$

$\boldsymbol{s}: \left\{j_{sa}^{s}, \cdots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \cdots, j_{sa}^{i}\right\} \wedge$

$s > 4 \wedge \boldsymbol{s} = s + \mathbb{k} \wedge$

$\mathbb{k}_{z}: z = 1)\big) \Rightarrow$

$$
{}_{fz}S_{j_s, j_{ik}, j^{sa}}^{DSD} = \sum_{k=1}^{D+\boldsymbol{l_s}+j_{sa}-\boldsymbol{n}-\boldsymbol{l_{sa}}} \sum_{(j_s=\boldsymbol{l_{ik}}+\boldsymbol{n}-D-\cdots+1)}^{(\boldsymbol{l_s}-\cdots)}
$$

$$
\sum_{j_{ik}=\cdots+j_{sa}^{ik}-1}^{(\ )} \sum_{\cdots-\boldsymbol{l_{ik}})}
$$

$$
\sum_{n_i=\boldsymbol{n}+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=\boldsymbol{n}+\mathbb{k}-j_s+1)}
$$

$$
\sum_{n_{ik}=n_{is}+j_s-j_{ik}}^{(\ )} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k})}
$$

$$
\frac{\big(n_{\cdots} - j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa} - I\big)!}{(\cdots - I)! \cdot \big(\boldsymbol{n} + j^{sa} + j_{sa}^{ik} - j_{ik} - s - j_{sa}\big)!} \cdot
$$

$$
\frac{(\boldsymbol{l_s} - k - 1)!}{(\boldsymbol{l_s} - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
$$

$$
\frac{(D - \boldsymbol{l_i})!}{(D + j^{sa} - \boldsymbol{n} - \boldsymbol{l_{sa}})! \cdot (\boldsymbol{n} + \boldsymbol{l_{sa}} - j^{sa} - \boldsymbol{l_i})!}
$$

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DİZİN

B

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin son durumunun bulunabileceği olaylara göre
- simetrik olasılık, 2.3.1.1.1.1.1.1/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.1.1/3
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin son durumunun bulunabileceği olaylara göre
- simetrik olasılık, 2.3.1.1.1.1.2.1/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.2.1/3
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin son durumunun bulunabileceği olaylara göre
- simetrik olasılık, 2.3.1.1.1.3.1/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.3.1/3
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu simetrinin son durumunun bulunabileceği olaylara göre
- simetrik olasılık, 2.3.1.1.1.1.1/2
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.1.1/228
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.1.1/290

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu bağımsız simetrinin son durumunun bulunabileceği olaylara göre
- simetrik olasılık, 2.3.1.1.1.1.2.1/203
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.2.1/228
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.2.1/290

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu bağımlı simetrinin son durumunun bulunabileceği olaylara göre
- simetrik olasılık, 2.3.1.1.1.1.3.1/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.3.1/22
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.3.1/290

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrinin son durumunun bulunabileceği olaylara göre
- simetrik olasılık, 2.3.1.1.1.4.1.1/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.4.1.1/3
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.4.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrinin son durumunun bulunabileceği olaylara göre
- simetrik olasılık, 2.3.1.1.1.4.2.1/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.4.2.1/3
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.4.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrinin son durumunun bulunabileceği olaylara göre
- simetrik olasılık, 2.3.1.1.1.4.3.1/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.4.3.1/3
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.4.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bağımsız durumlu simetrinin son durumunun bulunabileceği olaylara göre
- simetrik olasılık, 2.3.1.1.1.1.1.1/207
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.1.1/236

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toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.1.1/296-297

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bağımsız durumlu bağımsız simetrinin son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.1.1.2.1/207

toplam düzgün simetrik olasılık, 2.3.1.2.1.1.2.1/236

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.2.1/296-297

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bağımsız durumlu bağımlı simetrinin son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.1.1.3.1/207

toplam düzgün simetrik olasılık, 2.3.1.2.1.1.3.1/236

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.3.1/296-297

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrinin son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.1.6.1.1/3

toplam düzgün simetrik olasılık, 2.3.1.2.1.6.1.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.6.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrinin son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.1.6.2.1/3

toplam düzgün simetrik olasılık, 2.3.1.2.1.6.2.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.6.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrinin son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.1.6.3.1/3

toplam düzgün simetrik olasılık, 2.3.1.2.1.6.3.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.6.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin durumuna bağlı

simetrik olasılık, 2.3.1.1.1.1.1.1/105

toplam düzgün simetrik olasılık, 2.3.1.2.1.1.1.1/85

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.1.1/150-151

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin durumuna bağlı

simetrik olasılık, 2.3.1.1.1.1.3.1/105

toplam düzgün simetrik olasılık, 2.3.1.2.1.1.3.1/85

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.3.1/150-151

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin durumuna bağlı

simetrik olasılık, 2.3.1.1.1.6.1.1/105

toplam düzgün simetrik olasılık, 2.3.1.2.1.6.1.1/85

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.6.1.1/150-151

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.1.1.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.1.1.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.1.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.1.2.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.1.2.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.1.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.1.3.1/4

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toplam düzgün simetrik olasılık, 2.3.1.2.2.1.3.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.1.3.1/4
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrinin ilk ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.2.2.1.1/5
toplam düzgün simetrik olasılık, 2.3.1.2.2.2.1.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.2.1.1/6
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrinin ilk ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.2.2.2.1/5
toplam düzgün simetrik olasılık, 2.3.1.2.2.2.2.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.2.2.1/6
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrinin ilk ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.2.2.3.1/3-4
toplam düzgün simetrik olasılık, 2.3.1.2.2.2.3.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.2.3.1/5
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrinin ilk ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.2.4.1.1/4
toplam düzgün simetrik olasılık, 2.3.1.2.2.4.1.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.4.1.1/4
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrinin ilk ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.2.4.2.1/4
toplam düzgün simetrik olasılık, 2.3.1.2.2.4.2.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.4.2.1/4
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrinin ilk ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.2.4.3.1/4
toplam düzgün simetrik olasılık, 2.3.1.2.2.4.3.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.4.3.1/4
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrinin ilk ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.2.6.1.1/4
toplam düzgün simetrik olasılık, 2.3.1.2.2.6.1.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.6.1.1/4
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrinin ilk ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.2.6.2.1/4
toplam düzgün simetrik olasılık, 2.3.1.2.2.6.2.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.6.2.1/4
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrinin ilk ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.2.6.3.1/4
toplam düzgün simetrik olasılık, 2.3.1.2.2.6.3.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.6.3.1/4
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrinin ilk ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.2.7.1.1/5
toplam düzgün simetrik olasılık, 2.3.1.2.2.7.1.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.7.1.1/6
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrinin ilk ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.2.7.2.1/5

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toplam düzgün simetrik olasılık, 2.3.1.2.2.7.2.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.7.2.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrinin ilk ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.2.7.3.1/3-4
toplam düzgün simetrik olasılık, 2.3.1.2.2.7.3.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.7.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.3.1.1.1/4
toplam düzgün simetrik olasılık, 2.3.1.2.3.1.1.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.3.1.1.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.3.1.2.1/4
toplam düzgün simetrik olasılık, 2.3.1.2.3.1.2.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.3.1.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.3.1.3.1/4
toplam düzgün simetrik olasılık, 2.3.1.2.3.1.3.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.3.1.3.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.3.2.1.1/5
toplam düzgün simetrik olasılık, 2.3.1.2.3.2.1.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.3.2.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.3.2.2.1/5
toplam düzgün simetrik olasılık, 2.3.1.2.3.2.2.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.3.2.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.3.2.3.1/4
toplam düzgün simetrik olasılık, 2.3.1.2.3.2.3.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.3.2.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin herhangi iki durumuna bağlı
simetrik olasılık, 2.3.1.1.4.1.1.1/4
toplam düzgün simetrik olasılık, 2.3.1.2.4.1.1.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.4.1.1.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin herhangi iki durumuna bağlı
simetrik olasılık, 2.3.1.1.4.1.2.1/4
toplam düzgün simetrik olasılık, 2.3.1.2.4.1.2.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.4.1.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin herhangi iki durumuna bağlı
simetrik olasılık, 2.3.1.1.4.1.3.1/4
toplam düzgün simetrik olasılık, 2.3.1.2.4.1.3.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.4.1.3.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin her durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.4.1.1.1/838

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız

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simetrinin her durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.4.1.2.1/838
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin her durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.4.1.3.1/838
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.5.1.1.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.5.1.1.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.1.1.1/7-8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.5.1.2.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.5.1.2.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.1.2.1/7-8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.5.1.3.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.5.1.3.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.1.3.1/7-8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.5.2.1.1/6
toplam düzgün simetrik olasılık, 2.3.1.2.5.2.1.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.2.1.1/12
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.5.2.2.1/6
toplam düzgün simetrik olasılık, 2.3.1.2.5.2.2.1/3
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.2.2.1/12
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.5.2.3.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.5.2.3.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.2.3.1/7-8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı
simetrik olasılık, 2.3.1.1.8.1.1.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.8.1.1.1/8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı
simetrik olasılık, 2.3.1.1.8.1.2.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.8.1.2.1/8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı
simetrik olasılık, 2.3.1.1.8.1.3.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.8.1.3.1/8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı
simetrik olasılık, 2.3.1.1.8.2.1.1/12
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.8.2.1.1/13
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

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simetrik olasılık, 2.3.1.1.8.2.2.1/12
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.8.2.2.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı
simetrik olasılık, 2.3.1.1.8.2.3.1/8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.8.2.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.6.1.1.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.6.1.1.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.1.1.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.6.1.2.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.6.1.2.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.1.2.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.6.1.3.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.6.1.3.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.1.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.6.2.1.1/6
toplam düzgün simetrik olasılık, 2.3.1.2.6.2.1.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.2.1.1/9

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.6.2.2.1/6
toplam düzgün simetrik olasılık, 2.3.1.2.6.2.2.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.2.2.1/9

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.6.2.3.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.6.2.3.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.2.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.6.4.1.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.6.4.1.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.4.1.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.6.4.2.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.6.4.2.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.4.2.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.6.4.3.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.6.4.3.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.4.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.6.6.1.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.6.6.1.1/3-4

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toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.6.1.1/6
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.6.6.2.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.6.6.2.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.6.2.1/6
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.6.6.3.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.6.6.3.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.6.3.1/6
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.6.7.1.1/6
toplam düzgün simetrik olasılık, 2.3.1.2.6.7.1.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.7.1.1/6
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.6.7.2.1/6
toplam düzgün simetrik olasılık, 2.3.1.2.6.7.2.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.7.2.1/9
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.6.7.3.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.6.7.3.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.7.3.1/6
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı
simetrik olasılık, 2.3.1.1.9.1.1.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.1.1.1/8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı
simetrik olasılık, 2.3.1.1.9.1.2.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.1.2.1/8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı
simetrik olasılık, 2.3.1.1.9.1.3.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.1.3.1/8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı
simetrik olasılık, 2.3.1.1.9.2.1.1/12
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.2.1.1/13
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı
simetrik olasılık, 2.3.1.1.9.2.2.1/12
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.2.2.1/13
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı
simetrik olasılık, 2.3.1.1.9.2.3.1/8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.2.3.1/8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

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simetrik olasılık, 2.3.1.1.9.4.1.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.4.1.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.4.2.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.4.2.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.4.3.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.4.3.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.[illegible].1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.[illegible].1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.6.2.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.6.2.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.6.3.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.6.3.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.7.1.1/12
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.7.1.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.7.2.1/12
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.7.2.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.7.3.1/8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.7.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.1.1.1/5
toplam düzgün simetrik olasılık, 2.3.1.2.7.1.1.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.1.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.1.2.1/5
toplam düzgün simetrik olasılık, 2.3.1.2.7.1.2.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.1.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.1.3.1/5
toplam düzgün simetrik olasılık, 2.3.1.2.7.1.3.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.1.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.2.1.1/7

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toplam düzgün simetrik olasılık, 2.3.1.2.7.2.1.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.2.1.1/12
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.2.2.1/7
toplam düzgün simetrik olasılık, 2.3.1.2.7.2.2.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.2.2.1/12
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.2.3.1/5
toplam düzgün simetrik olasılık, 2.3.1.2.7.2.3.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.2.3.1/8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.4.1.1/5
toplam düzgün simetrik olasılık, 2.3.1.2.7.4.1.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.4.1.1/8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.4.2.1/5
toplam düzgün simetrik olasılık, 2.3.1.2.7.4.2.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.4.2.1/8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.4.3.1/5
toplam düzgün simetrik olasılık, 2.3.1.2.7.4.3.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.4.3.1/8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.6.1.1/5
toplam düzgün simetrik olasılık, 2.3.1.2.7.6.1.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.6.1.1/8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.6.2.1/5
toplam düzgün simetrik olasılık, 2.3.1.2.7.6.2.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.6.2.1/8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.6.3.1/5
toplam düzgün simetrik olasılık, 2.3.1.2.7.6.3.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.6.3.1/8
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.7.1.1/7
toplam düzgün simetrik olasılık, 2.3.1.2.7.7.1.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.7.1.1/12
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.7.2.1/7
toplam düzgün simetrik olasılık, 2.3.1.2.7.7.2.1/3-4
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.7.2.1/12
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.7.3.1/5

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toplam düzgün simetrik olasılık, 2.3.1.2.7.7.3.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.7.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.10.1.1.1/12-13

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.1.1.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.10.1.2.1/12-13

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.1.2.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.10.1.3.1/12-13

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.1.3.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.10.2.1.1/22

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.2.1.1/23

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.10.2.2.1/22

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.2.2.1/23

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.10.2.3.1/12-13

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.2.3.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.10.4.1.1/12-13

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.4.1.1/23

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.10.4.2.1/12-13

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.4.2.1/23

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.10.4.3.1/12-13

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.4.3.1/23

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.10.6.1.1/12-13 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.6.1.1/23

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

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simetrik olasılık, 2.3.1.1.10.6.2.1/12-13
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.6.2.1/23
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı
simetrik olasılık, 2.3.1.1.10.6.3.1/12-13
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.6.3.1/23
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı
simetrik olasılık, 2.3.1.1.10.7.1.1/22
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.7.1.1/23
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı
simetrik olasılık, 2.3.1.1.10.7.2.1/22
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.7.2.1/23
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı
simetrik olasılık, 2.3.1.1.10.7.3.1/12-13
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.7.3.1/13
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı
simetrik olasılık, 2.3.1.1.11.1.1.1/16
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.1.1.1/17
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı
simetrik olasılık, 2.3.1.1.11.1.2.1/16
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.1.2.1/17
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı
simetrik olasılık, 2.3.1.1.11.1.3.1/16
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.1.3.1/17
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı
simetrik olasılık, 2.3.1.1.11.2.1.1/29
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.2.1.1/30
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı
simetrik olasılık, 2.3.1.1.11.2.2.1/29
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.2.2.1/30
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı
simetrik olasılık, 2.3.1.1.11.2.3.1/16
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.2.3.1/17
Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

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simetrik olasılık, 2.3.1.1.11.4.1.1/16

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.4.1.1/30

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.11.4.2.1/16

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.4.2.1/30

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.11.4.3.1/16

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.4.3.1/30

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.11.6.1.1/16

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.6.1.1/30

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.11.6.2.1/16

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.6.2.1/30

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.11.6.3.1/16

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.6.3.1/30

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.11.7.1.1/29

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.7.1.1/30

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.11.7.2.1/29

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.7.2.1/30

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.11.7.3.1/16

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.7.3.1/17

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VDOİHİ'de Olasılık ve İhtimal konularının tanım ve eşitlikleri verilmektedir. Ayrıca VDOİHİ'de olasılık ve ihtimalin uygulama alanlarına da yer verilmektedir. VDOİHİ konu anlatım ciltleri ve soru, problem ve ispat çözümlerinden oluşmaktadır. Bu cilt bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz olasılık dağılımlarında, simetrinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılığın, tanım ve eşitliklerinden oluşmaktadır.

VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu si[illegible]in ilk ve herhangi iki durumunun bulunabileceği olaylara göre toplam düzgün sime[illegible]ik o[illegible]lık kitabında, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımla[illegible]a, simetr[illegible]in ilk herhangi iki durumunun bulunabileceği olaylara göre toplam düzgün sime[illegible]k olasılığ[illegible]ım ve eşitlikleri verilmektedir.

VDOİHİ'nin diğer ciltlerinde olduğu gibi bu ciltte de [illegible]rilen ana [illegible]likler, ola[illegible]lık tablolarından elde edilen verilerle üretilmiştir. Diğer eşitlikler[illegible]e ana eşitlik[illegible]den teorik yöntemle üretilmiştir. Eşitlik ve tanımların üretilmesi[illegible]ış kaynak[illegible]ullanılmamıştır.

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