

VDOİHİ

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

Cilt 2.3.1.2.3.1.1.1

İsmail YILMAZ

Matematik / İstatistik / Olasılık

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VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılık Cilt 2.3.1.2.3.1.1.1

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1. Bağımlı durumlu simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılık

Dili: Türkçe + Matematik Mantık



K. Atatürk

Türkiye Cumhuriyeti Devleti
Kuruluşunun
100. Yılı Anısına

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 deklaratif bilgi yapılarıyla birlikte matematik mantık yapıları üzerine çalışmalar yapmıştır. Yazarın farklı alanlarda yapmış olduğu çalışmalar arasında ölçme ve değerlendirmeye yönelik çalışmaları da mevcuttur.

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GÜLDÜNYA

Simge ve Kısaltmalar

n : olay sayısı

n : bağımlı olay sayısı

m : bağımsız olay sayısı

l : bağımsız durum sayısı

I : simetrisinin bağımsız durum sayısı

ll : simetrisinin bağımlı durumlarından önce bulunan bağımsız durum sayısı

I : simetrisinin bağımlı durumlarından sonra bulunan bağımsız durum sayısı

lk : simetrisinin bağımlı durumları arasındaki bağımsız durumların sayısı

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

l : ilgilenilen bağımlı durumun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası

l_i : simetrisinin ilk bağımlı durumunun, bağımlı olasılık farklı dizilimsiz dağılımın son olayı için sırası. Simetrisinin sonuncu bağımlı olayındaki durumun, bağımlı olasılık farklı dizilimsiz dağılımlardaki sırası

l_i : simetrisinin son bağımlı durumunun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası. Simetrisinin birinci bağımlı olayındaki durumun, bağımlı olasılık farklı dizilimsiz dağılımlardaki sırası

l_s : simetrisinin ilk bağımlı durumunun, bağımlı olasılıklı farklı dizilimsiz

dağılımlardaki sırası. Simetrisinin sonuncu bağımlı olayındaki durumun, bağımlı olasılık farklı dizilimsiz dağılımlardaki sırası

l_{ik} : simetrisinin aranacağı durumdan önce bulunan bağımlı durumun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası veya simetrisinin iki bağımlı durumu arasında bağımsız durum bulunduğu, bağımsız durumdan önceki bağımlı durumun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası

l_{sa} : simetrisinin aranacağı bağımlı durumunun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası. Simetrisinin aranacağı bağımlı olayındaki durumun, bağımlı olasılık farklı dizilimsiz dağılımlardaki sırası

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

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

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

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

durum arasında bağımsız durumun bulunduğu 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

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

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

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

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

$f_Z S_{j^{sa}}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin durumuna bağlı simetrik olasılık

$f_Z S_{j^{sa},0}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin durumuna bağlı simetrik olasılık

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$f_Z S_{j_s,j_i}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve son durumunun bulunabileceği olaylara göre simetrik olasılık

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$f_{Z,0} S_{j_s,j_i}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk ve son durumunun bulunabileceği olaylara göre simetrik olasılık

$f_{Z,0} S_{j_s,j_i,0}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre simetrik olasılık

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${}^0 f_Z S_{j_s,j_i}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız veya bağımlı-bağımsız veya bağımsız-bağımsız durumlu simetrisinin ilk ve son durumunun bulunabileceği olaylara göre simetrik olasılık

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${}^0 f_Z S_{j_s,j_i,D}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız veya bağımlı-bağımsız veya bağımsız-bağımsız durumlu bağımlı simetrisinin ilk ve son durumunun bulunabileceği olaylara göre simetrik olasılık

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bağımlı simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre simetrik olasılık

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$fzS_{j_i}^{DSD}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu

simetrisinin son durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılık

$fzS_{j_i, 0}^{DSD}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılık

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simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık

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durumlu simetrisinin 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 simetrisinin 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

bu yüğe sıralanmasıyla elde edilebilen kurallı tablolar kullanılmaktadır. Farklı dizilimsiz dağılımlarda durumların küçükten büyüğe sıralama için verilen eşitliklerde kullanılan durum sayısının düzenlenmesiyle, büyükten-küçüğe sıralama durumlarının eşitlikleri elde edilebilir.

Farklı dizilimli dağılımlar, dağılımın ilk durumuyla başlayan (bunun yerine farklı dizilimli dağılımlarda simetrisinin ilk durumuyla başlayan dağılımlar), dağılımın ilk durumu hariçinde dağılımın herhangi bir durumuyla başlayan dağılımlar (bunun yerine farklı dizilimli dağılımlarda simetride bulunmayan bir durumla başlayan dağılımlar) ve dağılımın ilk durumu hariç olmak üzere dağılımın başladığı farklı ikinci durumla başlayıp simetrisinin 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.

Bağımlı dağılım ve bir bağımsız olasılıklı durumla oluşturulabilen dağılımlara ve bağımlı olasılıklı dağılımların kendi olay sayısından (bağımlı olay sayısı) büyük olmasına (bağımsız olay sayısı) dağılımla bağımlı ve bir bağımsız olasılıklı dağılımlar elde edilir. Kurallı dağılım farklı dizilimsiz dağılımlarda bulunduğu gibi, bu dağılımlara bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlar elde edilir. Bağımlı ve bir bağımsız olasılıklı dağılımlar; bağımlı dağılımlara, bağımsız durumlar ilk durumdan dağıtılmaya başlanarak tabloları elde edilir. Bu bölümde verilen eşitlikler, bu yöntemle elde edilen kurallı tablolarla göre verilmektedir. Farklı dizilimsiz dağılımlarda durumların küçükten-

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 tanımlanma eşitlikleri verilmektedir.

Farklı dizilimsiz dağılımlarda simetrinin durumlarının olasılık dağılımındaki sırasına göre 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 durumlarının bulunabileceği olaylara göre çıkarılan eşitlikler kullanılmaktadır. Bu eşitlikler, bir bağımlı ve bir bağımsız olasılıklı dağılımlar için VDO'nun Çizim 1'de çıkarılan eşitliklerle birleştirilerek, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımların yeni eşitlikleri elde edilecektir. Eşitlikleri adlandırılmasında bağımlı olasılıklı farklı dizilimsiz dağılımlarda kullanılan adlandırılmalar kullanılacaktır. Bu adlandırılmaya 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 ad kullanılması durumunda gerekmedikçe yeni tanımlama yapılmayacaktır.

Simetrinin durumlarının bağımlı olasılık farklı dizilimsiz dağılımlarındaki sırasına göre verilen eşitliklerdeki toplam sınıra sınır değerleri, simetrinin küçükten-büyükçe 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-küçükçe sıralanan dağılımlar için de simetrik olasılık eşitlikleri elde edilecektir.

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

SİMETRİDEN SEÇİLEN İKİ DURUMA GÖRE TOPLAM DÜZGÜN SİMETRİK OLASILIK

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda, simetri bağımlı durumla başlayıp bağımlı durumla bittiğinde, simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara bağlı, düzgün simetrik durumların bulunduğu dağılımların sayısını gösteren eşitlik; simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre bağımlı olasılıklı farklı dizilimsiz toplam düzgün simetrik olasılık eşitliğiyle, bir bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımın bağımlı durumlu simetrisinin iki duruma göre simetrik olasılık eşitliğinin birleşiminden elde edilebilir. Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda, simetri bağımlı durumla başlayıp bağımlı durumla bittiğinde, simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre, toplam düzgün simetrik olasılıkların eşitliği

$$f_z S_{j_s, j_s^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_s^{sa}-j_{sa}+1)}^{()} \sum_{j_s^{sa}=l_i+n+j}^{l_s+j_{sa}-k} \sum_{n_i=n+l_k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+l_k-j_s+1)}^{()} \frac{(n_i-s-I)!}{(n_i-n-I)! \cdot (n-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_s^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_s^{sa}-s)!}$$

eşitliği elde edilir. Bu eşitliğe bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılık eşitliği denir. Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda, simetri bağımlı durumla başlayıp bağımlı durumla bittiğinde, simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara bağlı; düzgün simetrik durumların bulunduğu dağılımların sayısına **bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılık** denir. Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılık $f_z S_{j_s, j_s^{sa}}^{DSD}$ ile gösterilecektir.

$$((D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{sa} > D + \mathbf{l}_{ik} + j_{sa} - \mathbf{n} - j_{sa}^{ik} \wedge \mathbf{l}_i > D + \mathbf{l}_{sa} + s - \mathbf{n} - j_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge$$

$$\mathbf{l}_{ik} > D + \mathbf{l}_s + j_{sa}^{ik} - \mathbf{n} - 1 \wedge \mathbf{l}_i > D + \mathbf{l}_{sa} + s - \mathbf{n} - j_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{sa} - j_{sa} + 1 > \mathbf{l}_s \wedge$$

$$\mathbf{l}_{sa} > D + \mathbf{l}_s + j_{sa} - \mathbf{n} - 1 \wedge \mathbf{l}_i > D + \mathbf{l}_{sa} + s - \mathbf{n} - j_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_i > D + \mathbf{l}_s + s - \mathbf{n} - j_{sa})) \wedge$$

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

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

$$\{j_{sa}^1, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

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

$$f_z S_{j_s, j_{sa}}^{DSD} = 0$$

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

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

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

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

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

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

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

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

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

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

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1}$$

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

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

$$\frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (n - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

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

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

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

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

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

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

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

$$\frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!}$$

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

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

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

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_s}^{(z)} = \sum_{k=1}^{D-l_i+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

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

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

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!}$$

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

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

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

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

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

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

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

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

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

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

$$f_z S_{j_s, j_{sa}}^{DSD} \sum_{i=1}^{D-n} \sum_{(j_s=j^{sa}-j_{sa}+1)} \sum_{j_{sa}=\mathbf{l}_s+\mathbf{n}+j_{sa}-D-1}^{\mathbf{l}_s+j_{sa}-k}$$

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

$$\sum_{n_{ik}=\mathbf{n}_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!}$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$(D - \mathbf{l}_i)!$$

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

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z \sum_{j_s, j_{sa}}^{DSL} \sum_{i=1}^{D-n+1} \binom{D-n+1-i}{j_s=j_{sa}-i+1} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{D-n+1-i}{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z^{DSD} j_{sa}^s = \sum_{k=1}^{D-n+1} \binom{D-n+1}{k} \sum_{j_{sa}^s = j_{sa} - j_{sa} + k} \binom{D-n+1}{j_{sa} - j_{sa} + k} \sum_{j_{sa}^i = l_i + n + j_{sa} - D - s} \binom{D-n+1}{j_{sa}^i - l_i - n - j_{sa} + D + s} \sum_{n_i = n + \mathbb{k}}^n \sum_{n_{is} = n + \mathbb{k} - j_s + 1}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \binom{D-n+1}{n_{ik} - n_{is} - j_{sa}^s + j_{sa}^{ik}} \sum_{n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}} \binom{D-n+1}{n_{sa} - n_{ik} - j_{sa}^{ik} + j_{sa} + \mathbb{k}} \frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

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

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

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

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

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

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

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

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

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

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

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

$$f_z \mathcal{S}_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{i=0}^{\binom{l_s}{i}} \sum_{j=0}^{\binom{l_s-i}{j}} \sum_{l_i=0}^{\binom{l_s-i-j}{l_i}} \sum_{n_{is}=0}^{\binom{l_s-i-j-l_i}{n_{is}}} \sum_{n_{sa}=0}^{\binom{l_s-i-j-l_i-n_{is}}{n_{sa}}} \frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(j_{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!}$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - \mathbf{n} + 1 \wedge$$

$$j_s - j_{sa} - \mathbf{n} \leq j_{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

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

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

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

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

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

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

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

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

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

$$f_z^{S^{DSD}}_{j_s, j^{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s = j^{sa} - k + 1)} \sum_{(l_i = j_s - k - s + 1)} \sum_{(n_i = n + \dots)} \sum_{(n_s = n + \mathbb{k} - j_s + 1)} \dots$$

$$\frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_{sa} - k - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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

$2 \leq i \leq j^{sa} - j_{sa} - 1 \wedge$

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

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

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

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

$s: \{j_{sa}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n}^n \sum_{(n_{sa}=n+j_{sa}+1)}^{(n+j_{sa}+1)} \sum_{n_{ik}=n}^{n_{ik}} \sum_{(n_{sa}=n+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}=n+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i)!}{(n-i)! \cdot (n-s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - i)!}{(D + j_{sa} - n - i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

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

$$2 \leq j_s \leq j_{sa} - j_{sa} - 1 \wedge$$

$$j_s - 1 \leq j_{sa} \leq n - j_{sa} - s \wedge$$

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{(n_{sa}^{s}+j_{sa}^{ik}-j_{sa}^{ik}-\mathbb{k})} \frac{(n_i-s-l)!}{(n_i-l)! \cdot (n-s)!} \frac{(k!)!}{(l_s+j_s-k+1)! \cdot (s-2)!} \frac{(D-l_i)!}{(D+j_s+l_s-n-l_i-s)! \cdot (n+j_{sa}-j^{sa}-s)!}$$

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

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

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

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

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

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

$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s + \mathbb{k} \wedge$

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

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

$s: \{j_{sa}, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

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

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

$$f_Z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{()} \frac{(s-1)!}{(n-l)! \cdot (s)!} \cdot \frac{(l_s - k - 1)!}{(s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D-n)!}{(D+j^{sa}+s-n-\mathbb{k}-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

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

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

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

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

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

$$j_s \leq j_{sa} - 1 \wedge$$

$$s: \{j_s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} \wedge$$

$$j_{sa}^s \geq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

$$l_{k_z}: z = 1)) \Rightarrow$$

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

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

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

$$\frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!}$$

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

$$\frac{(D - l_i)}{(D + j_{sa} + s - n - I - j_{sa})! \cdot (n - j_{sa} - j_{sa} - 1)!}$$

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

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

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

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

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

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

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 3 \wedge s = \vee$

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

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

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

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

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

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k}$$

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

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}^{(\cdot)} \frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

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

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

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_{zS}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\cdot)} \sum_{j_{sa}=l_s+n+j_{sa}-D-1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}^{(\cdot)}$$

$$\frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa})!}$$

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

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

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

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

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

$$\frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

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

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

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

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

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

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

$$\frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!} \cdot$$

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

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

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

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$\sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_i-k-s+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

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

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

$$\frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!}$$

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

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

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

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

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

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_s, j_{sa}}^{DSD} \sum_{i=1}^{D-n+1} \sum_{(j_s=l_{ik}+1, \dots, D-j_{sa}^{ik}+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(n-k-j_{sa}^{ik}+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(\cdot)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!}$$

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

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z^{S_{j_s, j_{sa}^s}} = \sum_{k=1}^{D-n+1} \sum_{(j_s, \dots, n-D)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(n-j_s+1)}$$

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

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

$$\frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!} \cdot$$

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

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

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

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

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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

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

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

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

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

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

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

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

$$f_z^{\mathcal{S}^{DSD}}_{j_s, j^{sa}} = \sum_{k=1}^{D-n+1} \sum_{i=l_i+n-D-s}^{(l_{sa}-j_{sa}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(j_s+1)} \sum_{j_{sa}+\mathbb{k}}^{(n_{is}=n+\mathbb{k}-j_s+1)} \sum_{j_{sa}^{ik}=n_{is}+j_{sa}^{ik}}^{(j_{sa}^{ik})} \sum_{j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

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

$$2 \leq j_s \leq j^{sa} - \mathbf{n} + 1 \wedge$$

$$j_s - j_{sa} - \mathbf{n} \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

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

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

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

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-k)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{(j_{sa}=j_{sa}-1)}^{(n)} \sum_{(n_i=n+\mathbb{k})}^{(n_i)} \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i)} \frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - l_i - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

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

$$2 \leq j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$j_{sa}^s + j_{sa} - 1 \leq j_{sa} \leq n \wedge j_{sa} - s \wedge$$

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}} \sum_{n_i=0}^n \sum_{(n_{sa}=n+j_s+1)}^{(n-j_s+1)} \frac{(n_{ik})!}{(n_{sa})! \cdot (n-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-j_s-i)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

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

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

$$j_{sa} - 1 \leq j^{sa} \leq n - j_{sa} - s \wedge$$

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

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

$$j_{sa}^s \leq j_{sa} - 1$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z^{S_{j_s, j^{sa}}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \frac{(n_i-s-1)!}{(n_i-s-1)! \cdot (n-s-1)!} \frac{(n_i-k)!}{(l_s+j_s-k+1) \cdot (s-2)!} \frac{(D-l_i)!}{(D+j_s+k+s-n-l_i-s)! \cdot (n+j_{sa}-j^{sa}-s)!}$$

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

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

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

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

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

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

$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s + \mathbb{k} \wedge$

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

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

$s: \{j_{sa}, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

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

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

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_{sa}^{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{(n_{sa}-j_{sa}-\mathbb{k})} \frac{(n_{sa}-j_{sa}-\mathbb{k})!}{(n-l)! \cdot (n-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-n)!}{(D+j_{sa}+s-n)! \cdot (n+j_{sa}-j_{sa}^{sa}-s)!}$$

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

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

$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$

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

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

$j_s \leq j_{sa} - 1 \wedge$

$s: \{j_s, \dots, j_{sa}, \dots, j_{sa}\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l_s = \mathbb{k} < D \wedge$

$j_{sa} \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}, \mathbb{k}, j_{sa}\} \vee s: \{j_{sa}, \dots, j_{sa}, \mathbb{k}, j_{sa}, \dots, j_{sa}\} \wedge$

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

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

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

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

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

$$\frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!}$$

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

$$\frac{(D - l_i)}{(D + j^{sa} + s - n - I - j_{sa})! \cdot (n - j_{sa} - j^{sa} - I - 1)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s\} \wedge$$

$$s > 3 \wedge s = \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_s\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\cdot)}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!}$$

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

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

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

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

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

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk})} \frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

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

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

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

$$((D \geq \mathbf{n} < n \wedge l = \mathbb{k} = 0 \wedge$$

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk})} \frac{(n_i - s - l)!}{(n_i - \mathbf{n} - l)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$\frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z^{S_{j_s, j^{sa}}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

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

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

$$\frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

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

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

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

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

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

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

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

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

$$\frac{(n_i - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} - s)!}$$

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

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

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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

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

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

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

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

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

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

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \wedge$$

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

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

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1}$$

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

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

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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

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

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

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

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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

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

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$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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

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

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

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

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

- $((D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$
- $(D + s - n < (D + l_s + s - n - 1)) \wedge$
- $((D \geq n < n \wedge I = k = 0 \wedge$
- $j_{sa}^s \leq j_{sa} - 1 \wedge$
- $s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$
- $s \geq 3 \wedge s = s) \vee$
- $(D \geq n < n \wedge I = k > 0 \wedge$
- $j_{sa}^s \leq j_{sa} - 1 \wedge$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}^k=l_i+n+j_{sa}-D-1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n}^n \sum_{(n_{sa}=n+j_{sa}+1)}^{(n_{sa}=n+j_{sa}+1)} \sum_{(n_{ik}=n_{sa}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()} \frac{(n_{ik})!}{(n-l)! \cdot (n-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1) \wedge$$

$$2 \leq j_s \leq j_{sa} - 1 \wedge$$

$$j_s - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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

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

$$1 \leq j_s \leq j_{sa} - 1 \wedge$$

$$j_s - j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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

$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-k+1)}^{()} \sum_{j_{sa}=l_{sa}}^{l_{ik}+j_{sa}-j_{sa}^{ik}+1} \sum_{n_i=n_i}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_i-s-l)!}^{(n_i-n-l)! \cdot (n-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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

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

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

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

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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

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

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

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

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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

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

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

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

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

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

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

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{(n_{sa}^{s}+j_{sa}^{ik}-j_{sa}^{sa}-k)} \frac{(n_i-s-l_i)!}{(n_i-l_i)! \cdot (n-s-l_i)!} \frac{(k-l_i)!}{(l_s+l_i-k+1)! \cdot (s-2)!} \frac{(D-l_i)!}{(D+j_s+l_s-n-l_i-l_{sa})! \cdot (n+l_s+j_{sa}-j^{sa}-s)!}$$

- $((D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $((D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $((D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

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

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

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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

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

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

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

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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

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

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

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

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0) \wedge$$

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > 0) \wedge$$

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

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

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{()}{(j_s=j_{sa}-j_{sa}+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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

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

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

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

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

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

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

$$(D + s - n < l_i \leq (D + l_s + s - n - 1)) \wedge$$

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \vee$$

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_{sa}^{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{(n_{sa}-j_{sa}^{ik})} \frac{(n-l)!}{(n-l)! \cdot (s-l)!} \cdot \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l)!}{(D-l)!} \cdot \frac{(n+j_{sa}-j_{sa}^{ik}-s)!}{(n+j_{sa}-j_{sa}^{ik}-s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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

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

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

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

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

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

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

$$(D + s - n < n < D - (s + s - n - 1)) \wedge$$

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

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

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-} \sum_{n_i=n}^n \frac{(n_i)!(j_s+1)!}{(n-l)! \cdot (n-s)!} \cdot \frac{(l_s-k-1)!}{(l_s+j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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

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

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

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

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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

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

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

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

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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

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

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$$

$$s \geq s_0 \wedge (s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > \wedge$$

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

$$s: \{j_{sa}^s, \mathbb{k}, j_s^i, j_{sa}\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_s^i\} \wedge$$

$$j_{sa}^s = s + \mathbb{k} \wedge$$

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

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} (n_i-j_s+1)$$

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

$$\frac{(n_i - s - l)!}{(n_i - n - l) \cdot (n - s)!}$$

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

$$\frac{(D - l_i)}{(D + j_{sa} + s - n - l - j_{sa})! \cdot (n - j_{sa} - j_{sa} - 1)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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

$$(D > n < n \wedge l_s > D - n + 1 \wedge$$

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

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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

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

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

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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

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

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

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

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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

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

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

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

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1) \vee$$

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

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

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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

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

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

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

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

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

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

$$D + s - n < l_i \leq D + l_s + n - 1) \wedge$$

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}^i\}$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

$$j_{sa}^s \leq j_{sa} - 1) \Rightarrow$$

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

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

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

$$\frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!}$$

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

$$\frac{(D - l_i)}{(D + j_{sa} + s - n - I - j_{sa})! \cdot (n - j_{sa} - j_{sa} - 1)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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

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

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

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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

$$(D + s - n < l_i \leq l_s + 1 \wedge (n - 1)) \wedge$$

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_i=n+k-j_s+1)}^{(n_i-j_s+1)} \frac{(n_i-s-l)!}{(n_i-l)! \cdot (n-s)!} \cdot \frac{(l_s-k)!}{(l_s-k+1)! \cdot (s-2)!} \cdot \frac{(D-l_i)!}{(D+j_s-s-n-l_i)! \cdot (n+j_{sa}-j^{sa}-s)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_s, j_{sa}}^{DSD} = 0$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

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

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

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

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

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

$((D > n < n \wedge l_s = 0 \wedge$

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

$s: \{j_{sa}^s, \dots, j_{sa}^s, j^i\}$

$s \geq 3 \wedge s \leq s) \vee$

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

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

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

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

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

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})} \frac{(n_i + j_s + j_{sa} - j^{sa} - j_{sa}^{ik} + 1)! \cdot (l_{sa} - j_s)!}{(n_i - n - l)! \cdot (n + j_s - j_{sa} - j^{sa} - j_{sa}^{ik})! \cdot (j_{sa}^{s})!} \cdot \frac{(l_{sa} - k - 1)!}{(l_{sa} - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l)!}{(D + j^{sa} + s - n - l_{sa} - j_{sa}^{ik})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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

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

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

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

$$((D \geq n < n \wedge l_{sa} - \mathbb{k} = 0 \wedge$$

$$j_s \leq j_{sa} - 1 \wedge$$

$$s: \{j_s, \dots, j_{sa}, \dots, j_s\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n, l_{sa} - \mathbb{k} \geq 0 \wedge$$

$$j_s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}, \mathbb{k}, j_s, j_{sa}\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

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

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

$$\sum_{n_{ik}=n_{i_s}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\)}$$

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

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

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

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

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

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

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

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

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

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 3 \wedge s = s + \mathbb{k} \vee$

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

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

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

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

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

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

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

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \binom{(\quad)}{\quad} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \dots)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - \dots - s)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_Z^{S_{j_s, j_{sa}^{DSD}}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)} \binom{(\quad)}{\quad} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1}$$

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

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \binom{(\quad)}{\quad}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa})!}$$

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

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

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

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

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

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

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

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

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

$$j_s, j^{sa} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

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

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

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

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

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$S_i^{DS} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=l_{sa}+n-D}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

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

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

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

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

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_{z \cup j_{sa}}^{CD} = \sum_{k=1}^{D-\mathbf{n}} \sum_{j_{sa}^{sa}-j_{sa}+1}^{()} \sum_{j_{sa}=l_{sa}+\mathbf{n}-D}^{l_s+j_{sa}-k}$$

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

$$\sum_{n_{ik}=\mathbf{n}_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

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

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

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

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

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_{sa}^s}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{\substack{l_i+j_{sa}-s+1 \\ j_{sa}^s-j_{sa}+1 \\ a=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i+j_s+j_{sa}-j_{sa}^s-s-I-j_{sa}^s)!}{(n_i-n-I)! \cdot (n+j_s+j_{sa}-j_{sa}^s-s-j_{sa}^s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

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

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

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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

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

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

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

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

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

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

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

$$f_z \mathcal{S}_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s = \dots, j_{sa} + 1)}^{()} \sum_{j_{sa} = \dots, n + j_{sa} - D - j_{sa}^{ik}}^{l_{sa}} \sum_{(j_s + 1)}^{()} \sum_{n_{is} = n + \mathbb{k} - j_s + 1}^{()} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{()} \frac{(j_s + j_{sa} - j_{sa}^s - s - I - j_{sa}^s)!}{(n_i - n_{is} - I)! \cdot (n + j_s + j_{sa} - j_{sa}^s - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s \wedge$$

$$j_s - j_{sa}^s \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

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

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

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

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}^{ik} = n+j_{sa}-j_{sa}^{ik}}^{l_s+k} \sum_{n_i=n+l_s-k}^{(n_i)} \sum_{n_{ik}=n+l_s-k-j_s+1}^{(n_{ik})} \frac{(n_i + j_s + j_{sa}^{sa} - s - I - j_{sa}^s)!}{(n_i - l_s - I)! \cdot (n + j_{sa} - j_{sa} - s - j_{sa}^s)!} \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \frac{(D - l_i)!}{(D - l_s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

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

$$2 \leq j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n \wedge j_{sa} - s \wedge$$

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{l_i+j_{sa}-k-s+1}^{()} \sum_{n_i=0}^n \frac{(n_i+j_{sa}-j_{sa}-s)!}{(n_i-n-1)!} \frac{(n+j_{sa}-j_{sa}-s-j_{sa}^s)!}{(l_s-k-1)!} \frac{(l_s-j_s-k+1)! \cdot (j_s-2)!}{(D-j_s)!} \frac{1}{(D+j_{sa}-n-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

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

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

$$j_s - j_{sa} - 1 \leq j^{sa} \leq n - j_{sa} - s \wedge$$

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z^{SDSD} S_{j_s, j^{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_s+n+j_{sa}-D-1}^{l_{sa}-k+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \frac{(k-1)!}{(l_s + j_s - k + 1)! (s-2)!} \frac{(D-l_i)!}{(D + j_s + s - n - l_i - j_{sa}^s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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

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

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

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

$(n \geq n < n - l = \mathbb{k} = 1) \wedge$

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

$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s + \mathbb{k} \wedge$

$(D \geq n - 1 \wedge l = \mathbb{k} > 0 \wedge$

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

$s: \{j_{sa}, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

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

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

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{j^{sa}=l_s+n+j_{sa}-D-1}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \frac{(n_i+j_s+j_{sa}-j^{sa}-l_s-j_s)!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j^{sa}-j_{sa}^s)!} \cdot \frac{(l_s+\mathbb{k}-1)!}{(l_s-\mathbb{k}+1)! \cdot (j_s-2)!} \frac{(D-n+1)!}{(D+j^{sa}+s-n+\mathbb{k}-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

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

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

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

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

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

$j_s \leq j_{sa} - 1 \wedge$

$s: \{j_s, \dots, j_{sa}, \dots, j_{sa}^s\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l_s = \mathbb{k} \wedge$

$j_{sa}^s \geq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_s, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

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

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

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

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

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

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

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

$$\frac{(D - l_i)}{(D + j^{sa} + s - n - I - j_{sa})! \cdot (n_i - j_{sa} - j^{sa} - 1)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s\} \wedge$$

$$s \geq 3 \wedge s = \dots \vee$$

$$(D \geq n < n \wedge I = \dots > 0 \wedge$$

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\cdot)} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l_i)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}^{(\cdot)} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l_i)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}}{1}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}^{(\cdot)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa})!}$$

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

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z \mathcal{S}_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

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

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

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

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

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

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

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

$$j_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \binom{l_{ik}-k-j_{sa}^{ik}+2}{(j_s=l_i+n-D-s+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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

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

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

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

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

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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

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

$$\begin{aligned} \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} & \\ \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} & \\ \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()} & \\ \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} & \\ \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} & \\ \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} & \end{aligned}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

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

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

$$f_z^{DSD} S_{j_s, j_{sa}}^{DSD} \sum_{k=1}^{D-n} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k-s+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

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

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

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

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

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

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

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

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

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

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

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

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} \sum_{i=1}^{D-n+1} \binom{l_s - k - j_{sa}^{ik}}{j_s = l_{sa} + i - D - j_{sa} + 1} j_{sa} = j_s + j_{sa} - 1 \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_{sa}^s - j_{sa}^{ik}} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{(\)} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z c_{j_{sa}^s}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{l_s=1}^{l_s} \sum_{l_{sa}=l_{sa}+n}^{l_{sa}+n} \sum_{j_{sa}^i=j_{sa}+1}^{j_{sa}^i} j_{sa}^i = j_{sa} + j_{sa} - 1$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j_{sa}^i - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j_{sa}^i - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa}^i + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^i - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^i \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{l_i=k}^{(l_i-k)+2} \sum_{n_{is}=n-D-j_{sa}^{lk}}^{j_{sa}=j_s+j_{sa}-1} \sum_{n_{is}+k}^{i_s+1} \sum_{n_{is}+k}^{n_{is}+k} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-k}^{()} \frac{(n_{is}+j_s+j_{sa}-j_{sa}^s-s-I-j_{sa}^s)!}{(n_i-n_{is}-I)! \cdot (n+j_s+j_{sa}-j_{sa}^s-s-j_{sa}^s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$(D \geq n < n \wedge l_s > D - j_{sa} + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - 1 \wedge$$

$$j_s - j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{(n_i=n+1)}^{(n_i=n)} \sum_{(n_i=n+\mathbb{k})}^{(n_i=n+\mathbb{k}-j_s+1)} \sum_{(n_{ik}=n+j_{sa}-j_{sa}^{ik})}^{(n_{ik}=n+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i + j_s + j_{sa} - j_{sa}^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_{sa} - j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$(D \geq n < n \wedge I = \mathbb{k} > D - 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} - 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n \wedge j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_i \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-n}^{(j_s+1)} \sum_{n_i=n}^{(n+j_s+1)} \sum_{n_{ik}=n}^{(n+j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i + j_{sa} - s)!}{(n_i - n - 1)! \cdot (n + j_s - j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - n_i)!}{(D + j_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - 1 \wedge$$

$$j_s - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} + j_{sa}^{ik} + 1 = l_s \wedge n_{sa} + j_{sa}^{ik} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z^{S_{j_s, j^{sa}}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j^{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \frac{(n_i + j_s + j^{sa} - j^{sa} - s - I - j^{sa})!}{(n_i - n - I)! \cdot (n + j_s + j^{sa} - j^{sa} - s - j^{sa})!} \frac{(l_s + j_s - k + 1)!}{(s - 2)!} \frac{(D - l_i)!}{(D + j_s + j^{sa} - s - n - l_i - j^{sa})! \cdot (n + j_s + j^{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j^{sa} + 1 \wedge$

$j_s + j^{sa} - 1 \leq j^{sa} \leq n + j^{sa} - 1 \wedge$

$l_{ik} - j^{ik} + 1 = l_s + j^{sa} + j^{ik} - j^{sa} - j^{ik} \wedge l_{ik} + j^{sa} - s = l_{sa} \wedge$

$(D \geq n < n - I = \mathbb{k} = 0 \wedge$

$j^{sa} \leq j^{sa} - 1 \wedge$

$s: \{j^{sa}, \dots, j^{sa}, \dots, j^{sa}\} \wedge$

$s \geq 3 \wedge s = s + \mathbb{k} \wedge$

$(D \geq n < n - I = \mathbb{k} > 0 \wedge$

$j^{sa} \leq j^{sa} - 1 \wedge$

$s: \{j^{sa}, \mathbb{k}, j^{sa}, j^{sa}\} \vee s: \{j^{sa}, \dots, j^{sa}, \mathbb{k}, j^{sa}, \dots, j^{sa}\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{(l_{sa}-k-j_{sa}+2)} \frac{(n_i + j_s + j_{sa} - j^{sa})! \cdot (l_{sa} - j_{sa})!}{(n_i - n - l)! \cdot (n + j_s - j_{sa} - j^{sa})! \cdot (j_{sa}^s)!} \cdot \frac{(l_{sa} - k - 1)!}{(l_{sa} - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l)!}{(D + j^{sa} + s - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge l_{sa} - \mathbb{k} = 0 \wedge$

$j_s \leq j_{sa} - 1 \wedge$

$s: \{j_s, \dots, j_{sa}, \dots, j_s\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l_{sa} - \mathbb{k} > 0 \wedge$

$j_{sa}^s \neq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_s, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!} \cdot$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - n - I - j_{sa})! \cdot (n_{sa} - j_{sa} - 1)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D + s - n < l_i \leq n + l_{sa} + j_{sa} - j^{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{(n_{sa}^{ik}+j_{sa}^{ik}-j_{sa}-k)} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^{s})!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^{s})!} \frac{(k-1)!}{(l_s + j_s - k + 1) \cdot (s-2)!} \frac{(D-l_i)!}{(D + j_s + j_{sa} - j^{sa} - s - n - l_i - j_{sa}^{s})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

- $((D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$
- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$
- $(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk)}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$\sum_{k=1}^{l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1, \dots, \mathbb{k} \Rightarrow$$

$$f_z^{DSD} S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

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$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{DSD} = \sum_{k=1}^{D+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{l=1}^{D+l_s+s-n-l_i} \sum_{i=0}^{(l_s-k+l)} \sum_{j_{sa}=1}^{j_{sa}-1} \sum_{n_i=n+l}^n \sum_{(n_{is}=n+l-k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n+l_s+j_s+j_{sa}-j_{sa}^s-s-I-j_{sa}^s)!}{(n_i-l)! \cdot (n+l_s+j_{sa}-j_{sa}^s-s-j_{sa}^s)!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+l_s-j_{sa}-s)!}$$

$$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

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$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D + j_{sa} - n - l_{sa}} \sum_{(j_s = j_{sa}^{sa} - k + 1)}^{j_{sa} - k - j_{sa}^{ik} + 1} \sum_{j_{sa}^{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_{sa}^s - j_{sa}^{ik}} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{(\)} \frac{(n_i + j_s + j_{sa} - j_{sa}^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j_{sa}^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^{sa} - s)!}$$

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$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{l_s} = \sum_{i=1}^{D+l_s+s-n-l_{sa}} \binom{()}{(j_s=j_{sa}-j_{sa}+1)} \sum_{j_{sa}^{ik}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

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$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_i} \binom{j_{sa}-n-l_{sa}}{k} \binom{l_s-j_{sa}-k}{j_{sa}-j_{sa}^{sa}} \binom{l_s-j_{sa}-k}{j_{sa}=l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(l_i + j_s + j_{sa} - j_{sa}^s - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j_{sa}^s - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}+n-D}^{l_s+j_{sa}-k} \frac{(n_i+1) \dots (n_i+\mathbb{k}+1) (n_{is}+n+\mathbb{k}+1) \dots (n_{ik}=n_{is}+j_{sa}^{ik} (n_{sa}-n_{is}+j_{sa}-\mathbb{k}))}{(n_i+j_{sa}-j_{sa}-j_{sa}^s-s-I-j_{sa})! \cdot (n_{is}+j_{sa}-j_{sa}^s-s-j_{sa}^s)! \cdot (l_s-k-1)! \cdot (l_s-j_s-k+1)! \cdot (j_s-2)! \cdot (D-l_i)! \cdot (D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$((D > n < n \wedge l_s \leq D - n + 1 \wedge$$

$$j_s \leq j_{sa} - j_{sa} + 1) \wedge$$

$$j_s - j_{sa} - 1 \leq j_{sa} - j_{sa} + j_{sa} \wedge$$

$$l_s - j_{sa} - 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 - j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{l_i+n-D-s}^{(l_{ik}-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(j_s+1)} \sum_{n_{is}+\mathbb{k}}^{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i - n_{is} - I)! \cdot (n + j_s + j_{sa} - j_{sa}^s - s - I - j_{sa}^s)!}{(l_s - k - 1)! \cdot (l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa}^s \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_s - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{i=1}^{+l_s + j_{sa} - n - l_s} \sum_{(j_s = l_{sa} - D - j_{sa} + 1)}^{(l_{ik} - k - \mathbb{k} + 2)} \sum_{j_{sa} = j_s + j_{sa} - 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}}^{()} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j_{sa}^s - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j_{sa}^s - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-k+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_{sa}-1}^{j_{sa}-1} \sum_{n_i=n+l_s-k}^n \sum_{j_s=n+l_s-k-j_s+1}^{(n+l_s-k-j_s+1)} \sum_{n_{ik}+j_{sa}-j_{sa}^{ik}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i + j_s + j_{sa} - j_{sa}^{ik} - s - I - j_{sa}^s)!}{(n_i - I)! \cdot (n + j_{sa} - j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - l_i - n - l_s - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$(D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_s-k+1)} \frac{(n_i+j_s+j_{sa}-j^{sa})! \cdot (l-j_s)!}{(n_i-n-l)! \cdot (n+j_s-j_{sa}-j^{sa})! \cdot (j_{sa}^s)!} \cdot \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

- $((D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$
- $(D + s - n < D + s + s - n - 1)) \wedge$
- $((D \geq n < n \wedge l = k = 0 \wedge$
- $j_{sa}^s \leq j_{sa} - 1 \wedge$
- $s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^s\} \wedge$
- $s \geq 3 \wedge s = s) \vee$
- $(D \geq n < n \wedge l = k > 0 \wedge$
- $j_{sa}^s \leq j_{sa} - 1 \wedge$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$(\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_s}^{l_s+j_{sa}-k} \dots$$

$$((D \geq n < n \wedge l_s > D - n + 1) \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} - 1 \wedge$$

$$j_s \leq j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} - 1 \wedge$$

$$j_s \leq j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-j_{sa}^{ik}+1) j_{sa}^s=j_{sa}-1}^{(l_s-k+1)} \sum_{n_i=n+1}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i - l_i + j_{sa} - j_{sa}^a - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (j_s + j_{sa} - j_{sa}^a - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^a + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^a - s)!}$$

$$((D > n < n \wedge l_s \leq D - n + 1 \wedge$$

$$j_s \leq j_{sa} - j_{sa} + 1$$

$$j_s + j_{sa} - 1 \leq j_{sa}^a \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$(l_{sa} > D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^a \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} > D + l_s + j_{sa}^{ik} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} > D + l_s + j_{sa} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_i > D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, \mathbb{k}, j_{sa}^i, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1) \vee$$

$$(\mathbb{k}_z: z = 1)) \Rightarrow$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$f_z S_{j_s, j_{sa}}^{DSD} = 0$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z \mathcal{S}_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{l_i=j_{sa}-j_s+1}^{(n_{is}-j_{sa}+1)} \sum_{l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-1} \sum_{j_s+1}^{(n_{is}+k)} \sum_{(n_{is}+k-j_s+1)}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)} \frac{(n_i + 2 \cdot j_s - 2 \cdot j_{sa} - 2 \cdot j_{sa}^s - s - I - 2 \cdot j_{sa}^s)!}{(n_i - I)! \cdot (n_{is} + k - j_s + 2 \cdot j_{sa} - 2 \cdot j_{sa}^s - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(n + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - 1 \wedge$$

$$j_s - j_{sa}^s \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

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$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{\mathcal{S}_{j_s, j_{sa}^{DSD}}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-k+1)}^{(j_s=j_{sa}-k+1)} \sum_{(j_{sa}=j_{sa}-k+1)}^{(j_{sa}=j_{sa}-k+1)} \sum_{(n_i=n+1)}^{(n_i=n+1)} \sum_{(n_s=n+\mathbb{k}-j_s+1)}^{(n_s=n+\mathbb{k}-j_s+1)} \sum_{(n_{ik}=n+j_{sa}-j_{sa}^{ik})}^{(n_{ik}=n+j_{sa}-j_{sa}^{ik})} \sum_{(n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik})} \frac{(n_i + 2 \cdot j_s - 2 \cdot j_{sa} - 2 \cdot j_{sa} - s - 1 - 2 \cdot j_{sa}^s)!}{(n_i - n - 1)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j_{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$2 \leq i \leq j_{sa} - j_{sa} - 1 \wedge$$

$$i + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{ik} \wedge l_{ik} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

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$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+1}^n \sum_{(j_s=j_s+1)}^{(j_s+1)} \frac{(n_i+2 \cdot j_s+2 \cdot j_{sa}-2 \cdot j_{sa}-s-l_{ik})!}{(n_i-n-1)! \cdot (n+2 \cdot j_s-2 \cdot j_{sa}-s-2 \cdot j_{sa}^s)!} \cdot \frac{(l_s-k-1)!}{(l_s+j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-n_i)!}{(D+j_{sa}-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_{sa} \leq j_{sa} - 1 \wedge$$

$$j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} + j_{sa} + 1 = l_s \wedge l_{ik} + j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 1) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_s+n+j_{sa}-D-1}^{l_s+j_{sa}-k} \sum_{n_i=n+k}^n \sum_{(n_{i_s}=n+k-j_s+1)}^{(n_i-j_s+1)} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - 1 - 2 \cdot j_{sa}^{i_s})!}{(n_i - n - 1)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^{i_s})!} \frac{(k!)!}{(l_s + j_s - k + 1) \cdot (s - 2)!} \frac{(D - l_i)!}{(D + j_s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - 1 \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s + j_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_{ik} + j_{sa} - s = l_{sa} \wedge$

$(D \geq n < n - 1 = \mathbb{k} = 1 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s + \mathbb{k} \wedge$

$(D \geq n < n - 1 = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} j^{sa}=l_i+n+j_{sa}-D-s \sum_{l_{sa}=k+1}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{()} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}!) \cdot (2 \cdot j_{sa} - s - j_{sa}!) \cdot (j_s - k - 1)! \cdot (j_s - k + 1)! \cdot (j_s - 2)!}{(n_i - n - 1)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - j_{sa}!) \cdot (j_s - k - 1)! \cdot (j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - 1)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

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$((D \geq n < n \wedge l_{sa} - \mathbb{k} = 0 \wedge$

$j_s \leq j_{sa} - 1 \wedge$

$s: \{j_s, \dots, j_{sa}, \dots, j_s\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l_{sa} - \mathbb{k} > 0 \wedge$

$j_{sa}^s \neq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_s, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} j^{sa}=l_i+n+j_{sa}-D-s \sum_{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\quad)}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - j_s - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - n - I - j_{sa})! \cdot (n_{is} - j_{sa} - j^{sa} - s - I - 2 \cdot j_{sa}^s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$((D \geq n < n \wedge I = \mathbb{k} = 0) \vee$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s\} \wedge$$

$$s > 3 \wedge s = \dots \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_s\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_s\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$(\mathbb{k}_z: z = 1))$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)} \sum_{(l_i+j_{sa}-k-s+1)}^{(n)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \sum_{(n_i-j_s+1)}^{(n)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

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$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s}^{D-1} = \sum_{k=1}^{D-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

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$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$((D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{(j_s=j^{sa}-j_{sa}+1)}^{D-\mathbf{n}+1} \sum_{j_{sa}=\mathbf{l}_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{\mathbf{l}_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=\mathbf{n}_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - \mathbf{l}_i)!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_s-k)}^{j_s+j_{sa}-k} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(l_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j_{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j_{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_{z_i}^{DSD} j_{sa} = \sum_{k=1}^{D-n+1} \sum_{l_i+j_{sa}-k-s+1}^{j_{sa}-j_{sa}^s} \sum_{j_{sa}=l_s+n+j_{sa}-D-1}^{j_{sa}-j_{sa}^s} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i + 2 \cdot j_{sa} - 2 \cdot j_{sa}^s - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j_{sa}^s - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(i_{is}=j_{sa}-j_{sa}+1)}^{(i_{is}=j_{sa}+1)} \sum_{(l_s=n+j_{sa}-D-1)}^{(l_s=j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_{is}=n+\mathbb{k})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}=n_{ik}+j_{sa}^{ik})} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(n + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge l_s > D - j_s + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - 1 \wedge$$

$$j_s - j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z^{S_{j_s, j_{sa}^{DS}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1, \dots, l_s+n+1, \dots, D-1)}^{(l_{ik}+j_{sa}^{ik}-j_{sa}^{ik}+1)} \sum_{(n_i=n+l_s, \dots, n+l_s-j_s+1)}^{(n_i)} \sum_{(n_{ik}=n+l_s+j_{sa}-j_{sa}^{ik}, \dots, n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i + 2 \cdot j_s - 2 \cdot j_{sa} - 2 \cdot j_{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - D)! \cdot (n_i + j_s + 2 \cdot j_s - 2 \cdot j_{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$2 \leq j_s \leq j_{sa} - j_{sa} - 1 \wedge$

$j_s + j_{sa} - 1 \leq j_{sa} \leq n \wedge j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 \leq l_i \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$(\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_{zS}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_i-k-s+2)} \sum_{j_{sa}=j_s+j_{sa}-n}^{(j_s+1)} \sum_{n_i=0}^n \sum_{(n_{sa}=n+j_{sa}-j_s+1)}^{(j_s+1)} \sum_{n_{ik}=0}^{(j_s+1)} \sum_{(n_{sa}=n+j_{sa}-j_s+1)}^{(j_s+1)} \frac{(n_i + 2 \cdot j_s + 2 - 2 \cdot j_{sa} - s - 1)!}{(n_i - n - 1)! \cdot (n + 2 \cdot j_s - 2 \cdot j_{sa} - 2 \cdot j_{sa} - s - 2 \cdot j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - n_i)!}{(D + j_{sa} - n - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1$$

$$2 \leq j_s \leq j_{sa} - 1 \wedge$$

$$j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} + j_{sa} + 1 = l_s + j_{sa} + j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \dots$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}^{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k})} \dots$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j_{sa}^{sa} - 1 - 2 \cdot j_{sa}^{sa})!}{(n_i - n - 1)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j_{sa}^{sa} - s - 2 \cdot j_{sa}^{sa})!} \dots$$

$$\frac{(l_s + j_s - k + 1)!}{(l_s - j_s - 2)!} \dots$$

$$\frac{(D - l_i)!}{(D + j_s + s - n - l_i - \dots)! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - 1 \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s + j_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_{ik} + j_{sa} - s = l_{sa} \wedge$

$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s + \mathbb{k} \wedge$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_s-j_{sa}-\mathbb{k})} \frac{(n_i+2 \cdot j_s+2 \cdot j_{sa}-2 \cdot j_{sa}^s-s-1-j_s)!}{(n_i-n-1)! \cdot (n+2 \cdot j_s+2 \cdot j_{sa}-2 \cdot j_{sa}^s-s-1-j_s)!} \cdot \frac{(l_s-\mathbb{k}-1)!}{(l_s-\mathbb{k}+1) \cdot (j_s-2)!} \cdot \frac{(D-n)!}{(D+j_{sa}+s-n-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$$

$$((D > n < n \wedge l_s > D - n + 1) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1) \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1) \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{(\cdot)}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_s)!}{(n_i - n - 1)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_s)! \cdot (j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - 1)!}{(D + j^{sa} + s - n - l_s - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge l_s - \mathbb{k} = 0 \wedge$

$j_s \leq j_{sa} - 1 \wedge$

$s: \{j_s, \dots, j_{sa}, \dots, j_{sa}^s\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l_s - \mathbb{k} > 0 \wedge$

$j_{sa}^s \neq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_s, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{i_s}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^s)}^{(\quad)}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}$$

$$\frac{(l_s - k - j_{sa}^s - j_{sa}^{ik} - 1)! \cdot (l_s - j_{sa}^s - j_{sa}^{ik} - 2)!}{(D - l_i)}$$

$$\frac{1}{(D + j^{sa} + s - n - I - j_{sa})! \cdot (n - j_{sa} - j^{sa} - s + I - 1)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^s = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{ik} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \vee$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = \mathbb{k} \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z^{\mathcal{S}_{j_s, j^{sa}}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - j_{sa}^{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$(\mathbb{k}_z: z = 1))$$

$$f_Z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - l - 2 \cdot j_{sa}^s)!}{(n_i - n - l)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{\mathbb{k}}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_i-k-s+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - l - 2 \cdot j_{sa}^s)!}{(n_i - n - l)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$j_s^{SD} j_{sa}^{SD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$\sum_{k=1}^{n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \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_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\)}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} \sum_{k=1}^{D-n} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(n-s+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - l - 2 \cdot j_{sa}^s)!}{(n_i - n - l)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z \sum_{j_s, j_{sa}}^{DSL} \sum_{i=1}^{D-n+1} \sum_{(j_s=l_{ik}+1)}^{k-j_{sa}+1} \sum_{(D-j_{sa}^{ik}+1)}^{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{cDSD} j_{sa}^{j_{sa}} = \sum_{k=1}^{D-n+1} \sum_{l_i = l_{ik} + n - j_{sa}^{ik} + 1}^{l_s} j_{sa}^{j_{sa} - 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{()} \frac{(n_i + 2 \cdot j_{sa} - 2 \cdot j_{sa}^s - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j_{sa}^s - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{i=1}^{D-n+1} \sum_{j_s=l_s+n}^{\binom{k-s+2}{i}} \sum_{j_{sa}=j_s+j_{sa}-1}^{\binom{k-s+2}{i}} \sum_{j_s+1}^{\binom{k-s+2}{i}} \sum_{j_{sa}+\mathbb{k}}^{\binom{k-s+2}{i}} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{\binom{k-s+2}{i}} \sum_{j_{sa}^{ik}=n_{is}+j_s}^{\binom{k-s+2}{i}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{\binom{k-s+2}{i}}$$

$$\frac{(n_i + 2 \cdot j_s - 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - I)! \cdot (n + j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(n + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n \wedge l_s > D - 1 + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - 1 + 1 \wedge$$

$$j_s - j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+\dots+n)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j_{sa}=j_{sa}-1}^{(n)} \sum_{n_i=n+l_s+\dots+n}^{(n)} \sum_{j_s=n+\mathbb{k}-j_s+1}^{(n)} \frac{(n_i + 2 \cdot j_s - 2 \cdot j_{sa} - 2 \cdot j_s - s - 1 - 2 \cdot j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + 2 \cdot j_s - 2 \cdot j_{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$(D \geq n < n \wedge I = \mathbb{k} > D - n + 1 \wedge$

$2 \leq i \leq j_{sa} - j_{sa} - 1 \wedge$

$i + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^i + 1 = l_i \wedge l_i + j_{sa}^i - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-} \sum_{n_i=n}^n \frac{(n_i + 2 \cdot j_s + 2 - 2 \cdot j_{sa} - s - 1)!}{(n_i - n - 1)! \cdot (n + 2 \cdot j_s - 2 \cdot j_{sa} - 2 \cdot j_{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - n_i)!}{(D + j_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1$$

$$2 \leq j_s \leq j_{sa} - j_{sa}^s \wedge$$

$$j_s - j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa}^s \wedge$$

$$j_s - j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-j_{sa}^{ik})}^{()} \sum_{(j_{sa}=l_i+n+j_{sa}^{ik}-s)}^{()} \sum_{n_i=n}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik})}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()} \frac{(j_s+2 \cdot j_{sa}^{ik} - s - l - 2 \cdot j_{sa}^s)!}{(D-n-l)! \cdot (j_s+2 \cdot j_{sa}^{ik} - s - l - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D > n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1$$

$$j_s + j_{sa} - 1 \leq j_{sa} < n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

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$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa})$$

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$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}}^{(n_{sa}^{ik})} \sum_{(n_{sa}^{ik}-k)}^{(n_{sa}^{ik}-k)} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - l_i - 2 \cdot j_{sa}^{ik})!}{(n_i - n - l_i)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^{ik})!} \cdot \frac{(n_{sa}^{ik} - k)!}{(l_s - n_{sa}^{ik} - k + 1) \cdot (n_{sa}^{ik} - 2)!} \cdot \frac{(D - l_i)!}{(D + j_s + j_{sa} - n - l_i - 1)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$((D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_i \leq D + l_s + s - n - 1) \vee$$

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$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: \dots) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l_i)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-k)} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}!) \cdot (j_s - k + 1)!}{(n_i - n - 1)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}!) \cdot (j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^k, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

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$$f_Z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}^{()} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - l - 2 \cdot j_{sa}^s)!}{(n_i - n - l)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s < D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S^{D, s} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1, \dots, \mathbb{k} \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{()}{(j_s=j_{sa}-j_{sa}+1)} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{()}{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - l - 2 \cdot j_{sa}^s)!}{(n_i - n - l)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$((D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D + s - n < l_i \leq D + l_s + n - 1) \wedge$

$((D \geq n < n \wedge l = \mathbb{k} = 0) \vee$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^i\}$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^s, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$(j_s = j_s) \Rightarrow$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{()}{(j_s=j^{sa}-j_{sa}+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{s})}^{()}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - l - 2 \cdot j_{sa}^s)!}{(n_i - n - l)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - n - l - j_{sa})! \cdot (n - j_{sa} - j^{sa} - s - l)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D > n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1) \vee$$

$$(\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{()}{(j_s=j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{()}{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - l - 2 \cdot j_{sa}^s)!}{(n_i - n - l)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{DSD} j_{sa} = \sum_{k=1}^{D+j_{sa}-n-l_{sa}} \binom{()}{(j_s=j_{sa}-j_{sa}+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{()}{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1 \wedge$$

$$(\mathbb{k} : z = 1))$$

$$fz^{SD} j_s, j^{sa} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

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$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s \wedge \mathbb{k} \wedge$

$\mathbb{k}_{2-2} = \mathbb{k} \Rightarrow$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}^{()} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - l - 2 \cdot j_{sa}^s)!}{(n_i - n - l)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1 \wedge$$

$$\mathbb{k}: z = 1) \wedge$$

$$f_{z=1}^{D, j_s, j_{sa}} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z^{DSD} = \sum_{k=0}^{D+l_s-j_{sa}-n-1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{j_s=l_{sa}+n-D-j_{sa}+1-k+1} \sum_{n_i=n+\mathbb{k}}^{n_i=n+\mathbb{k}-j_s+1} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_{z=1}^{SD} = \sum_{k=1}^{D+l_s} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1, \dots, \mathbb{k} \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} > D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge l_i > D + l_{sa} + s - n - j_{sa}^{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} > D + l_s + j_{sa}^{ik} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}^{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} + j_{sa}^{ik} + 1 > l_s \wedge$$

$$l_{sa} > D + l_{ik} + j_{sa} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}^{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_i > D + l_{sa} + s - n - j_{sa}^{ik}) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i + j_{sa} - s \wedge l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

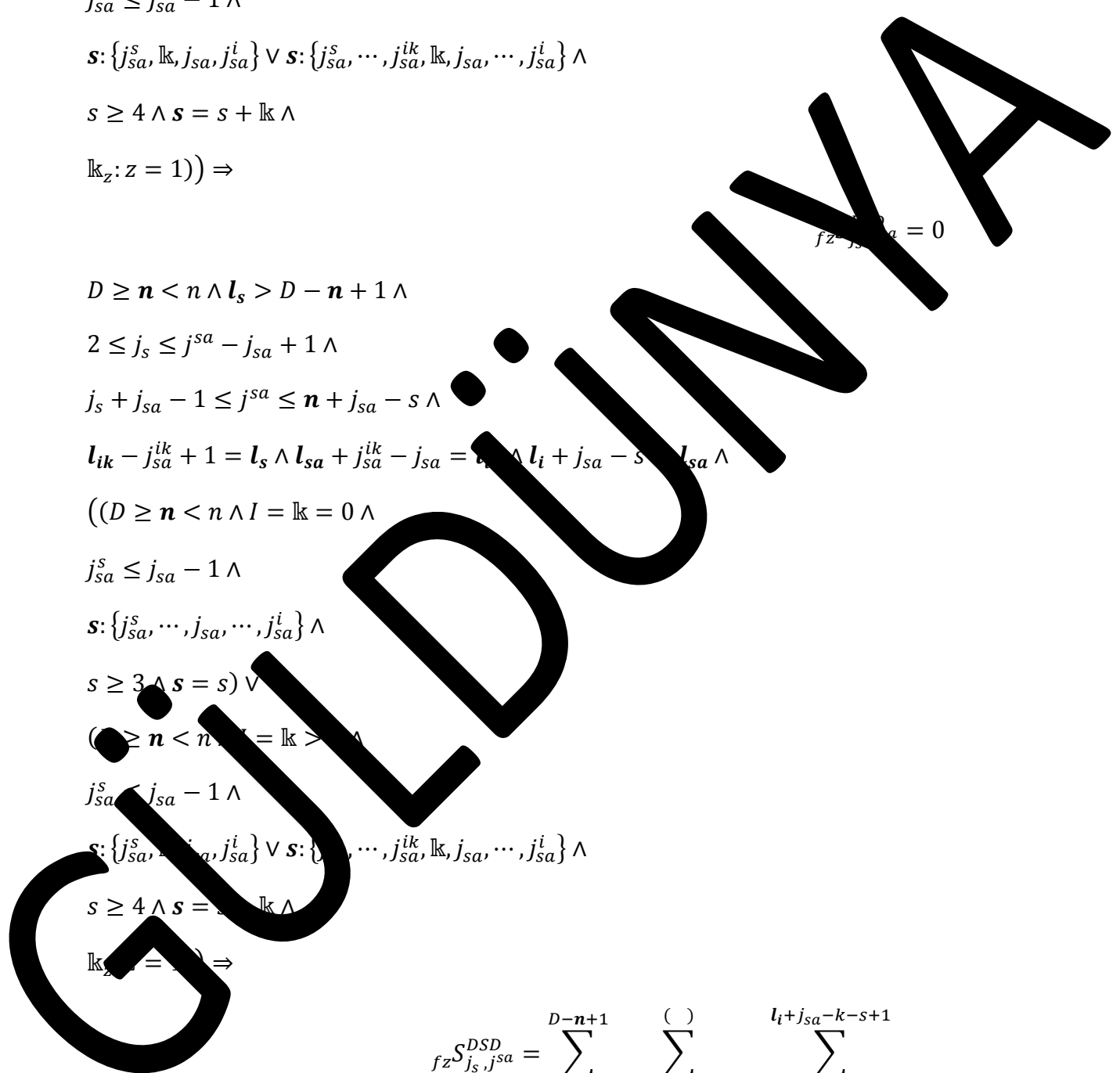
$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$



$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}^{(\cdot)}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - l)!}{(n_i - n - l)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l)!}$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$((D \geq n < n \wedge l = lk = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = lk > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, lk, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + lk \wedge$$

$$lk_z: z = 1)$$

$$f_Z^{S_{j_s, j^{sa}}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\cdot)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_i=n+lk-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}^{(\cdot)}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa})!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$j_s, j^{sa} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\)} \sum_{j_{sa}=l_s+n+j_{sa}-D-1}^{l_s+j_{sa}-k} \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_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\)}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$\sum_{k=1}^{n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(j_s=j^{sa}-j_{sa}+1)} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z \sum_{j_s, j_{sa}}^{DSL} \sum_{i=1}^{D-n+1} \binom{(\quad)}{(j_s=j_{sa}^{sa}+1)} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$\sum_{j_s=j_{sa}-\mathbb{k}-s+1}^{D-n} \sum_{j_{sa}=l_{sa}+n-D}^{n-j_s+\mathbb{k}-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{i_{sa}=j_{sa}+1}^{(l_{ik}+j_{sa})-k+1} \sum_{i_{sa}=l_{sa}+n-D}^{(i_s+1)} \sum_{i_{is}=n+k}^{(n_{is}=n+k-j_s+1)} \sum_{i_{sa}=n_{is}+i_{sa}^{ik}}^{j_{sa}^{ik}} \sum_{i_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i - n_{is} - I)! \cdot (n + j_{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(l_s - k - 1)! \cdot (l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge l_s > D - \dots + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s \wedge$$

$$j_s - j_{sa}^s \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-k+1)}^{(j_{sa}-k)} \sum_{(j_{sa}=n-D)}^{(j_{sa}-k)} \sum_{(n_i=n+1)}^n \sum_{(n_s=n+\mathbb{k}-j_s+1)}^{(n_s)} \sum_{(n_{ik}=n+j_{sa}-j_{sa}^s+1)}^{(n_{ik})} \sum_{(n_{ik}+j_{sa}^s-j_{sa}^i+1)}^{(n_{ik}+j_{sa}^i-j_{sa}-\mathbb{k})} \frac{(n_i + j_{sa} + j_{sa}^i - j_s - j_{sa} - s - I)!}{(n_i - I)! \cdot (n + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_{sa} - j_{sa}^i - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge I = \mathbb{k} > D - n + 1 \wedge$$

$$2 \leq i \leq j_{sa} - j_{sa} - 1 \wedge$$

$$i + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_i \wedge l_{ik} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_s}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n}^n \sum_{(n_i=j_s+1)}^{(n_i=j_s+1)} \sum_{n_{ik}=n}^{(n_{ik}=n)} \sum_{(n_{sa}=n+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()} \frac{(n_i+j_{sa}+j_{sa}-j_s-j_{sa})!}{(n_i-n-1)! (n+j_s-j_{sa}-j_s-j_{sa}-s)!} \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \frac{(D-n_i)!}{(D+j_{sa}-n-n_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - 1 \wedge$$

$$j_s - 1 \leq j_{sa} \leq n - j_{sa} - s \wedge$$

$$l_{ik} + j_{sa} + 1 = l_s, n_{ik} + j_{sa} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j_s^a}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_s^a-j_{sa}+1)} \sum_{j_s^a=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{is}+j_{sa}-j_{sa}^{ik})} \frac{(n_i + j_s^a + j_{sa}^s - j_s - j_{sa} - s - l)!}{(n_i - n - l)! \cdot (n + j_s^a + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - i_s - k + 1)!}{(l_s - i_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_s^a + j_{sa}^s - n - l_i - 1)! \cdot (n + j_s^a - j_s^a - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_s^a - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_s^a \leq n + j_{sa} - 1 \wedge$

$l_{ik} - i_{ik} + 1 = l_s - i_s + j_{sa}^{ik} - j_{sa} - i_{ik} \wedge n + j_{sa} - s = l_{sa} \wedge$

$(n \geq n < n \wedge l = \mathbb{k} = 1 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s_j$

$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s^{sa})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \frac{(n_i+j^{sa}+j_{sa}^s-j_s-j_{sa}^{ik}-s-1)!}{(n_i-n-1)! \cdot (n+j_{sa}^s-j_s-j_{sa}^{ik}-s)!} \cdot \frac{(l_s+\mathbb{k}-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-n)!}{(D+j^{sa}+s-n-\mathbb{k}-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge l_s = 0 \wedge$

$j_s \leq j_{sa} - 1 \wedge$

$s: \{j_s, \dots, j_{sa}, \dots, j_{sa}^s\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l_s = \mathbb{k} \wedge$

$j_{sa}^s \geq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_s, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_s+n+j_{sa}-D-1}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{i_s}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{()}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - j_s - 1 - k - 2)!}{(D - l_i)}$$

$$\frac{1}{(D + j^{sa} + s - n - l_s - j_{sa})! \cdot (n_{i_s} + j_{sa} - j^{sa} - s - 1)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge n_{i_s} + j_{sa} - s = n_{ik} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \vee$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_s\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_s\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{() } \sum_{j^{sa}=l_s+n+j_{sa}-D-1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\cdot)} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l_i)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_i + j_s - s = l_s \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_s^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\cdot)} \sum_{j^{sa}=l_s+n+j_{sa}-D-1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l_i)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa}^s - j_{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_i + j_s - s = l_s \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)$$

$$f_{zS}^{DSD}_{j_s, j^{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz \mathcal{S}_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$j_s^{SD}, j_{sa}^{SD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_{s, j_{sa}}^{s, D} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\)}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z^{S^{D_s}} = \sum_{k=1}^{D-s+1} \sum_{(j_s=l_i+n-D-s+1)}^{(n-k-j_{sa}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - l)!}{(n_i - n - l)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz_{j_s, j}^{SD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=l_s, \dots, l_s-k-j_{sa}^{ik})} \sum_{(n-D-s+1) j_{sa}=j_s+j_{sa}-1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - \mathbf{n} - I)! \cdot (\mathbf{n} + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{sa}}^{DSD} &= \sum_{k=0}^{D-n+1} \sum_{l_s=0}^{(l_s-k)} \sum_{j_s=l_s+k}^{(j_s=l_s+k-s+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(j_{sa}=j_s+j_{sa}-1)} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\ & \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \\ & \frac{(l_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{l_i=k}^{(l_i-k)+2} \sum_{j_s=j_{sa}-1}^{j_s+1} \sum_{j_{sa}=\mathbb{k}}^{n+\mathbb{k}-j_s+1} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{()} \frac{(n_{is}+j_{sa}+j_{sa}^s-j_s-j_{sa}-s-I)!}{(n_i-n_{is}-I)! \cdot (n+j_{sa}+j_{sa}^s-j_s-j_{sa}-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(n+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge l_s > D - l_i + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^{ik} + 1 \wedge$$

$$j_s - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D, \dots, j_{sa}=j_{sa}-1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{(n_i=n+1, \dots, n_i=n+\mathbb{k}-j_s+1)}^{(n_i)} \sum_{(n_{ik}=n+j_{sa}-j_{sa}^{ik}, \dots, n_{ik}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i + j_{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - n_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$2 \leq j_{sa}^s \leq j_{sa} - j_{sa} - 1 \wedge$$

$$j_{sa}^s + j_{sa} - 1 \leq j_{sa}^s \leq n \wedge j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{ik} \wedge l_{ik} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}} \sum_{n_i=0}^n \sum_{n_{i-1}=n-i}^{(n-j_s+1)} \dots \sum_{n_{ik}=0}^{(n_{sa}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i + j_{sa} + j_{sa} - j_s - j_{sa})!}{(n_i - n - 1)! (n + j_{sa} - j_s - j_{sa} - s)!} \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \frac{(D - i)!}{(D + j_{sa} - n - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1$$

$$2 \leq j_s \leq j_{sa} - 1 \wedge$$

$$j_{sa} - 1 \leq j_{sa} \leq n - j_{sa} - s \wedge$$

$$l_{ik} + j_{sa} + 1 = l_s + j_{sa} + j_{sa}^{ik} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \dots$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{is}+j_{sa}^s-j_{sa}^{ik}-\mathbb{k})} \dots$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - 1)!}{(n_i - n - 1)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \dots$$

$$\frac{(l_s - i_s - k + 1)!}{(l_s - i_s - 2)!} \dots$$

$$\frac{(D - l_i)!}{(D + j^{sa} + j_{sa}^s - n - l_i - 1)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - 1 \wedge$

$l_{ik} - i_{ik} + 1 = l_s - i_s + j_{sa}^{ik} - j_{sa} - i_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$(n \geq n < n - 1 = \mathbb{k} = 0 \wedge$

$j_{sa}^s - j_{sa} - 1 \wedge$

$\{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s,$

$(D \geq n < n - 1 = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{lk}+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_s-j_{sa}-lk)} \sum_{(j_s-k+1)}^{(j_s)} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - 1)!}{(n_i - n - 1)! \cdot (n + j_s - j_{sa} - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - k)!}{(D + j^{sa} + s - n - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge l_s = 0 \wedge$

$j_s \leq j_{sa} - 1 \wedge$

$s: \{j_s, \dots, j_{sa}, \dots, j_{sa}\} \wedge$

$\geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l_s = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + k \wedge$

$l_{k_z}: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_s-j_{sa}-k)} \frac{(n_i+j^{sa}+j_{sa}^s-j_s-j_{sa}-s-1)!}{(n_i-n-1)! \cdot (n+j_{sa}^s-j_s-j_{sa}-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \frac{(D-n+1-k)!}{(D-n+1-k)!} \frac{1}{(D+j^{sa}+s-n-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge l_s > D - n + 1) \vee k = 0 \wedge$$

$$j_s \leq j_{sa} - 1 \wedge$$

$$s: \{j_s, \dots, j_{sa}, \dots, j_{sa}\} \wedge$$

$$s \geq 3 \wedge s = s \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, k, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + k \wedge$$

$$k_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{i_s}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{i_s})}^{()}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - n - l_s - j_{sa})! \cdot (n_{i_s} - j_{sa} - j^{sa} - s - I)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{ik} \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0) \vee$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 3 \wedge s = s + \mathbb{k} \vee$

$(D > n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge s = s + \mathbb{k} \wedge$

$(\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n_i-j_s+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l_i)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - j_{sa}^{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)$$

$$f_z^{S_{j_s, j_{sa}^{DSD}}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l_i)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$((D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_s - s > l_s \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_s - s > l_{sa} \wedge$

$(D + s - n < l_i \leq (D + l_{sa} + s - n - j_{sa})) \wedge$

$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s + \mathbb{k} \vee$

$(D > n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-k)}^{()} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - s - 1)!}{(n_i - n - 1)! \cdot (n + j^{sa} + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_i - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^k, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k} = \dots) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - l)!}{(n_i - n - l)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$S_{j_s}^{DSD} = \sum_{k=1}^{l_s+s-n-l_i} \binom{()}{(j_s=j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1, \dots, \mathbb{k} \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - l)!}{(n_i - n - l)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z^{QSD} = \sum_{k=1}^{D+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, k, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + k \wedge$$

$$k_z: z = 1) \Rightarrow$$

$$f_z^{S^{DSD}} = \sum_{l=1}^{D+l_s+s-n-l_i} \sum_{(l_i+n-D)}^{(l_s-k+1)} \sum_{(n_i-j_s+1)}^{(n_i+k-j_s+1)} \sum_{(n_i+n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik})}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)} \frac{(n+l_s+j_{sa}^s+j_{sa}^s-j_s-j_{sa}-s-I)!}{(n_i-l_i-I)! \cdot (n+l_s+j_{sa}^s-j_s-j_{sa}-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+l_s+s-n-l_i-j_{sa})! \cdot (n+l_s-j_{sa}-s)!}$$

$$((D \geq n < n \wedge I = k > 0 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D + j_{sa} - n - l_{sa}} \sum_{(j_s = j_{sa}^{sa} - k + 1)}^{j_{sa} - k - j_{sa}^{ik} + 1} \sum_{j_{sa}^{sa} = l_i + n + j_{sa} - D - s} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \sum_{(n_{sa} = n_{ik} + j_{sa}^{lk} - j_{sa} - \mathbb{k})}^{()} \frac{(n_i + j_{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j_{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^l = \sum_{k=1}^{D+l_s+s-n-l_{sa}} \binom{()}{(j_s=j_{sa}-j_{sa}+1)} \sum_{j_{sa}^{ik}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{()}{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_i} \binom{j_{sa}-n-l_{sa}}{k} \binom{l_s-j_{sa}-k}{j_{sa}-j_{sa}^s} \binom{l_s-j_{sa}-k}{j_{sa}=l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(l_i + j_{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j_{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}^s+l_{sa}-D}^{l_s+j_{sa}-k} \frac{(n_i+j_{sa}^s-j_{sa}-j_s-j_{sa}-s-l)!}{(n-l)! \cdot (n+j_{sa}+j_{sa}-j_s-j_{sa}-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$j_s \leq j_{sa} - j_{sa} + 1) \wedge$$

$$j_s - j_{sa} - 1 \leq j_{sa} - j_{sa} + j_{sa}$$

$$l_k - j_{sa}^k + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 - j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^k + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{l_i+n-D-s}^{(l_{ik}-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(j_s+1)} \sum_{n_{is}+\mathbb{k}}^{(n_{is}+n+\mathbb{k}-j_s+1)} \sum_{n_{is}+j_{sa}^{ik}}^{(j_{sa}^{ik})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(j_{sa}^{lk})} \frac{(j_{sa}^s + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n_{is} - I)! \cdot (n + j_{sa}^s + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

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$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{i=1}^{+l_s + j_{sa} - n - l_s} \sum_{(j_s = l_{sa} - D - j_{sa} + 1)}^{(l_{ik} - k - \mathbb{k} + 2)} \sum_{j_{sa} = j_s + j_{sa} - 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}}^{(\cdot)} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{(\cdot)} \frac{(n_i + j_{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j_{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-k+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_{sa}-1}^{j_{sa}-1} \sum_{n_i=n+l_s-k}^n \sum_{n_s=n+\mathbb{k}-j_s+1}^{(n_s)} \sum_{n_{ik}+j_{sa}-j_{sa}^{ik}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i + j_{sa} + j_{sa} - j_s - j_{sa} - s - I)!}{(n_i - I)! \cdot (n + j_{sa} - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_{sa} - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - s - 1)!}{(n_i - n - 1)! \cdot (n + j^{sa} + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_s)!}{(D + j^{sa} + s - n - l_s - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < (D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^s\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$(\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_s}^{l_s+j_{sa}-k} \dots$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s > D - n + 1) \wedge \\ & 2 \leq j_s \leq j_{sa} - j_{sa} - 1 \wedge \\ & j_s - j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee \\ & ((D \geq n < n \wedge l_s \leq D - n + 1) \wedge \\ & 1 \leq j_s \leq j_{sa} - j_{sa} - 1 \wedge \\ & j_s - j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \\ & (D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge \\ & ((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge \\ & j_{sa}^s \leq j_{sa} - 1 \wedge \\ & s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge \end{aligned}$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-1)}^{(l_s-k+1)} \sum_{n_i=n+1}^n \sum_{j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i - j_{sa} + j_{sa}^s + j_{sa}^i) (j_s - j_{sa} - s - l)!}{(n_i - n - l)! \cdot (j_{sa}^s + j_{sa}^i - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} > D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} > D + l_s + j_{sa}^{ik} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} > D + l_s + j_{sa} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_i > D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1) \wedge$$

$$(\mathbb{k}_z: z = 1)) \Rightarrow$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$fz S_{j_s, j^{sa}}^{DSD} = 0$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{i=0}^{\binom{l_i+j_{sa}-1}{j_{sa}-j_s+1}} \sum_{l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-1} \sum_{j_s+1}^{j_s+1} \sum_{n_{is}+k}^{n_{is}+k} \sum_{n_{is}+k}^{n_{is}+k} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{\binom{l_i+j_{sa}-1}{j_{sa}-j_s+1}} \frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_{sa} - n - \mathbb{k} - j_{sa})! \cdot (n + j_{sa} - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - j_{sa} + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_s + 1 \wedge$$

$$j_s - j_{sa} - j_s \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-k+1)}^{(j_s=j_{sa}-k+1)} \sum_{j_{sa}=j_{sa}-k+1}^{j_{sa}=j_{sa}-k+1} \sum_{n_i=n+1}^n \sum_{j_s=n+\mathbb{k}-j_s+1}^{(n+\mathbb{k}-j_s+1)} \frac{(n_{is} + s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_{sa} - j_s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$2 \leq i \leq j_{sa} - j_{sa} - 1 \wedge$

$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 \leq l_i \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$(\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \frac{\sum_{n_i=n}^n \sum_{(j_s=j_s+1)}^{(\quad)} \sum_{(n_{sa}=n_{sa}+j_{sa}+1)}^{(\quad)} \sum_{(n_{ik}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{(\quad)} \sum_{(n_{sa}=n_{sa}+j_{sa}-j_{sa}^{ik})}^{(\quad)}}{(n_{is}+j_s-n_{ik}-\mathbb{k}-j_{sa})! \cdot (n+j_{sa}^s-s-j_s)! \cdot (l_s-k-1)! \cdot (l_s+j_s-k+1)! \cdot (j_s-2)! \cdot (D-n_i)!} \cdot \frac{1}{(D+j_{sa}^s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$j_{sa}^s - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} + j_{sa}^{ik} + 1 = l_s \wedge l_{ik} + j_{sa}^{ik} + j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 1) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_s+n+j_{sa}-D-1}^{l_s+j_{sa}-k} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \frac{(n_{is}-s-k)!}{(n_{is}+j_s-n-k-j_{sa})! \cdot (n_{is}+j_{sa}-s-j_s-k)!} \frac{(n_{is}-k)!}{(l_s+n_{is}-k+1) \cdot (n_{is}-2)!} \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n_{is}+j_{sa}-j^{sa}-s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - 1 \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_{ik} + j_{sa} - s = l_{sa} \wedge$

$(D \geq n < n \wedge I = \mathbb{k} = 1) \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s + 1 \wedge$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} j^{sa} = l_i + n + j_{sa} - D - s \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \frac{(n_{is}-s-1)! \cdot (n+j_{sa}-j_s)!}{(n_{is}+j_s-n-k-j_{sa})! \cdot (j_s-k-1)!} \cdot \frac{(j_s-k+1)! \cdot (j_s-2)!}{(D-k)!} \cdot \frac{(D-k)!}{(D+j^{sa}+s-n-k-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge l_{ik} = 0 \wedge$$

$$j_s \leq j_{sa} - 1 \wedge$$

$$s: \{j_s, \dots, j_{sa}, \dots, j_s\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_{ik} = k > 0 \wedge$$

$$j_s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}, k, j_s, j_{sa}\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, k, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + k \wedge$$

$$k_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} j^{sa} = l_i + n + j_{sa} - D - s \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\quad)}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_s^s - s - j_s)^!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - n - l_s - j_{sa})! \cdot (n_{is} - j_{sa} - j_s - 1)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge n_{ik} + j_{sa} - s = n_{is} \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0) \vee$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s\} \wedge$

$s > 3 \wedge s = 1 \vee$

$(D > n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_s\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge s = s + \mathbb{k} \wedge$

$(\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z^{DSD} S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \binom{(\quad)}{\quad} (n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \dots)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa}^s - \dots - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}^s-j_{sa}+1)} \binom{(\quad)}{\quad} \sum_{j_{sa}^s=l_{sa}+n-D}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \binom{(\quad)}{\quad}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \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_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\)}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\)} \sum_{j_{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\)}$$

$$(n_{is} - s - \mathbb{k})!$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$(l_s - k - 1)!$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s}^{D-1} = \sum_{k=1}^{D-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{(j_s = j^{sa} - j_{sa} + 1)}^{D-n+1} \sum_{j_{sa} = l_{ik} + n + j_{sa} - D - j_{sa}^{ik}}^{l_{sa} - k + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{()} \frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_s-k)}^{j_s+j_{sa}-k} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}} \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_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\)} \frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_{zj_{sa}^s}^{SDSD} = \sum_{k=1}^{D-n+1} \sum_{j_{sa}^s = j_{sa} - j_{sa}^{ik}} \sum_{j_{sa} = l_s + n + j_{sa} - D - 1}^{l_i + j_{sa} - k - s + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{()} \frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(i_{is}=j_{sa}-j_{sa}+1)}^{(i_{is}=j_{sa}-j_{sa}+1)} \sum_{(l_s=n+j_{sa}-D-1)}^{(l_s=n+j_{sa}-D-1)} \dots$$

$$\dots \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_{is}=n+\mathbb{k}-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \dots$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_{sa} - n - \mathbb{k} - j_{sa})! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - j_{sa} + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s - j_{sa} - j_{sa} \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1, \dots, l_s+n+1, \dots, D-1)}^{(n)} \frac{l_{ik} + j_{sa}^{ik} - j_{sa}^{ik} + 1}{(n_{is} + j_{sa} - n - \mathbb{k} - 1)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} - 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n \wedge j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_i \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_i-k-s+2)} \sum_{j_{sa}=j_s+j_{sa}-} \sum_{n_i=1}^n \sum_{(n_{sa}=n+j_{sa}-j_s+1)}^{(n-j_s+1)} \sum_{n_{ik}=1}^{(n_{sa}-j_{sa}^{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{is}+s-\mathbb{k})!}{(n_{is}+j_s-\mathbb{k}-j_{sa}^{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})! \cdot (n+j_{sa}^s-s-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s+j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-j_s-i)!}{(D+j_{sa}^s-n-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1$$

$$2 \leq j_s \leq j_{sa} - 1 \wedge$$

$$j_{sa} - 1 \leq j_{sa} \leq n - j_{sa} - s \wedge$$

$$l_{ik} + j_{sa}^{ik} + 1 = l_s + j_{sa} + j_{sa}^{ik} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \frac{\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}^{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}-\mathbb{k})} \frac{(n_{is}-s-\mathbb{k})!}{(n_{is}+j_s-n-\mathbb{k}-j_{sa}^s)! \cdot (n_{is}+j_{sa}^s-s-j_s-\mathbb{k})!} \frac{(n_{sa}^{ik}-\mathbb{k})!}{(l_s+n_{is}-k+1) \cdot (n_{is}-2)!}}{(D+j_s+n-s-n-l_i-\mathbb{k})! \cdot (n_{is}+j_{sa}^s-j_{sa}^s-s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - 1 \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s + j_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge n_{is} + j_{sa} - s = l_{sa} \wedge$

$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s + \mathbb{k} \wedge$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_s-j_{sa}-lk)} \frac{(n_{is}-s-lk) \cdot (n+j_{sa}^s-j_s)! \cdot (l_s-lk-1)! \cdot (j_s-lk+1) \cdot (j_s-2)! \cdot (D-n)!}{(D+j_{sa}+s-n-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$

$((D > n < n \wedge l_s = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1) \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l_s = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, lk, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, lk, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + lk \wedge$

$lk_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{(\cdot)} \frac{(n_{is}-s-1)! \cdot (n+j_{sa}-j_s)!}{(n_{is}+j_s-n-\mathbb{k}-j_{sa}^{s})! \cdot (l_s-k-1)!} \cdot \frac{(l_s-k+1)!}{(l_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-n+1)!}{(D+j^{sa}+s-n-\mathbb{k}-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge l_s - \mathbb{k} = 0 \wedge$$

$$j_s \leq j_{sa} - 1 \wedge$$

$$s: \{j_s, \dots, j_{sa}, \dots, j_{sa}\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_s - \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \neq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_s, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\quad)}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_s - s - j_s)!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j_{sa} + s - n - l_s - j_{sa})! \cdot (n_{is} - j_{sa} - j_{sa} - 1)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge n_{ik} + j_{sa} - s = n_{is} \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0) \vee$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 3 \wedge s = s + \mathbb{k} \vee$

$(D > n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_Z^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(n_i-j_s+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \binom{(\quad)}{\quad} (n_{is}-s-\mathbb{k})!}{(n_{is}+j_s-n-\mathbb{k}-j_{sa}^s)! \cdot (n+j_{sa}^s-s-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-\dots)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}^s+s-n-l_i-j_{sa})! \cdot (n+j_{sa}^s-\dots-s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \wedge l_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)$$

$$f_Z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \binom{(\quad)}{\quad}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$j_s^{SD} j_{sa}^{SD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$\sum_{k=1}^{n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$(n_{is} - s - \mathbb{k})!$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$(l_s - k - 1)!$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$(D - l_i)!$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} \sum_{k=1}^{D-n} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(n-k-s+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

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$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

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$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z \sum_{j_s, j_{sa}}^{DSL} \sum_{i=1}^{D-n+1} \sum_{(j_s=l_{ik}+1)}^{-k-j_{sa}+1} \sum_{D-j_{sa}^{ik}+1}^{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

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$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{DSD} j_{sa}^s = \sum_{k=1}^{D-n+1} \sum_{l_i = l_{ik} + n - j_{sa}^{ik} + 1}^{l_s} j_{sa}^s = j_{sa}^s + j_{sa} - 1$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}}^{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})} \sum_{(n_{is} - s - \mathbb{k})!}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{l_s=1}^{D-n+1} \sum_{j_s=l_s+n}^{\binom{k-s+2}{j_s}} \sum_{j_{sa}=j_s+j_{sa}-1}^{\binom{k-s+2}{j_s}} \sum_{j_{sa}+l_s}^{\binom{k-s+2}{j_s}} \sum_{n_{is}=n+l_s-j_s+1}^{\binom{k-s+2}{j_s}} \sum_{j_{sa}^{ik}=n_{is}+j_{sa}^{ik}}^{\binom{k-s+2}{j_s}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{\binom{k-s+2}{j_s}} \frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_{sa} - n - \mathbb{k} - j_{sa})! \cdot (n + j_{sa} - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - l_i + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - l_s + 1 \wedge$$

$$j_s - j_{sa} - l_s \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_s = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+\dots+n)}^{(l_{sa}-k-j_{sa}+2)} \sum_{(j_{sa}=j_{sa}+\dots+j_{sa}-1)}^{(n)} \sum_{(n_i=n+\dots+n+\mathbb{k}-j_s+1)}^{(n)} \sum_{(n_{ik}+\dots+j_{sa}-j_{sa}+\dots+n_{ik}+j_{sa}^i-j_{sa}-\mathbb{k})}^{(n)} \frac{(n_{is}+\dots-s-\mathbb{k})!}{(n_{is}+\dots-n-\mathbb{k}-j_s)! \cdot (n+j_{sa}^s-s-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D-l_i-j_{sa}+\dots-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$2 \leq i \leq j_{sa} - j_{sa} - 1 \wedge$$

$$i + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^i + 1 \leq l_i \wedge l_i + j_{sa}^i - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-} \sum_{n_i=n}^n \sum_{(n_{sa}=n+l_{sa}-j_{sa}-\mathbb{k})}^{(n_{sa}=n+l_{sa}-j_{sa}-\mathbb{k})} \frac{(n_{is}+j_s-n-\mathbb{k}-j_{sa})!}{(n_{is}+j_s-n-\mathbb{k}-j_{sa})! \cdot (n+j_{sa}^s-s-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s+j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-n_i)!}{(D+j_{sa}^s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1$$

$$2 \leq j_s \leq j_{sa} - j_{sa} \wedge$$

$$j_s \leq j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} \wedge$$

$$j_s \leq j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-j_s+1)}^{(j_s=j_{sa}-j_s+1)} \sum_{(j_{sa}=l_i+n+j_s-s)}^{(j_{sa}=l_i+n+j_s-s)} \sum_{n_i=n}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{sa}-j_s)}^{(n_{ik}=n_{is}+j_{sa}-j_s)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{is}+j_{sa}-\mathbb{k})!}{(n_{is}+j_s-1)! \cdot (j_{sa}^s)! \cdot (n+j_{sa}^s-s-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}^s+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa})$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}}^{(n_{sa}=n_{is}+j_{sa}^{ik}-j_{sa}-k)} \frac{(n_{is}-s-k)!}{(n_{is}+j_s-n-k-j_{sa}^s)! \cdot (n_{is}+j_{sa}-s-j_{sa}^s)!} \cdot \frac{(n_{ik}-k)!}{(l_s+l_i-k+1)! \cdot (n_{is}-2)!} \cdot \frac{(D-l_i)!}{(D+j_s+l_s-n-l_i-k)! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: \dots) \Rightarrow$$

$$f_z \mathcal{S}_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \dots)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - \dots - s)!}$$

$((D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_s - s > l_s \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_s - s > l_{sa} \wedge$

$(D + s - n < l_i \leq (D + l_{sa} + s - n - j_{sa})) \wedge$

$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s + \mathbb{k} \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

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$$fz_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_s-j_{sa}-k)} \frac{(n_{is}-s-j_{sa}^{s})!}{(n_{is}+j_s-n-k-j_{sa}^{s})! \cdot (n+j_{sa}-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^k, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k} = \dots) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}} \frac{(n_{is}-s-\mathbb{k})!}{(n_{is}+j_s-n-\mathbb{k}-j_{sa}^s)! \cdot (n+j_{sa}^s-s-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-l_s)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}^s+s-n-l_i-j_{sa})! \cdot (n+j_{sa}^s-j_{sa}-s)!}$$

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$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s < D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D + s - n < l_i \leq D + l_s + j_{sa} - n - 1) \vee$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{sa}^{D+L_s+S-n-l_i} = \sum_{k=1}^{D+L_s+S-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1, \dots, \mathbb{k} \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^i\}$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$j_{sa}^s \leq j_{sa} - 1) \Rightarrow$$

$$f_Z S_{j_s, j_{sa}^s}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{()}{(j_s=j_{sa}^s-j_{sa}+1)} \sum_{j_{sa}^s=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{s})}^{()}$$

$$\frac{(n_{is} - s - l_k)!}{(n_{is} + j_s - n - l_k - j_{sa}^s)! \cdot (n + j_s^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j_{sa} + s - n - l_s - j_{sa})! \cdot (n_{is} + j_{sa} - j_{sa}^s - 1)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D > n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1) \vee$$

$$(\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa})! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{DSD} = \sum_{k=1}^{D+j_{sa}-n-l_{sa}} \binom{()}{(j_s=j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{()}{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$(\mathbb{k} : z = 1))$$

$$fz^{SD} j_s, j^{sa} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s \wedge \mathbb{k} \wedge$$

$$\mathbb{k} \geq 2 \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\cdot)}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \dots)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - \dots - s)!}$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}: z = 1) \wedge$$

$$f_{z=1}^{D, j_s, j_{sa}} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$(n_{is} - s - \mathbb{k})!$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z^{DSD} = \sum_{k=0}^{D+l_s-j_{sa}-n-j_{sa}^{ik}+1} \sum_{j_s=l_{sa}+n-D-j_{sa}+1}^{j_s=j_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

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$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_{z=1}^{SD} = \sum_{k=1}^{D+l_s-j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1, \dots, \mathbb{k} \Rightarrow$$

$$f_{zS}^{DSD}_{j_s, j_{sa}} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} > D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge l_i > D + l_{sa} + s - n - j_{sa}) \wedge$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} > D + l_s + j_{sa}^{ik} - n - 1 \vee l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} + j_{sa} + 1 > l_s \wedge$$

$$l_{sa} > D + l_{ik} + j_{sa} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_i > D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

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$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\} \wedge$

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$(\mathbb{k}_z: z = 1))$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa}^s - s - s)!}$$

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$$(\mathbb{k}_z: z = 1))$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{\binom{()}{j_s=j^{sa}-j_{sa}+1}} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

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$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

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$$s \geq 3 \wedge s = s) \vee$$

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$$(\mathbb{k}_z: z = 1))$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{\binom{()}{j_s=j^{sa}-j_{sa}+1}} \sum_{l_{sa}^{-k+1}}^{l_{sa}-k+1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

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$s \geq 3 \wedge s = s) \vee$

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$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - \mathbf{n} - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

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$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - \mathbb{k} \wedge l_i + j_{sa} - s = l_{sa}$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4, \mathbb{k} = s + \mathbb{k} \wedge$$

$$(\mathbb{k}_z: z = 1))$$

$$f_{zS}^{DSD}_{j_s, j^{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{lk}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - j_s - s = l_{sa} \wedge l_i + j_{sa} - s = l_{sa}$

$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4, \mathbb{k} = s + \mathbb{k} \wedge$

$(\mathbb{k}_z: z = 1))$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_i-k-s+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - j_{sa}^{ik} \wedge l_i + j_{sa} - s = l_{sa}$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4, \mathbb{k} = s + \mathbb{k} \wedge$$

$$(\mathbb{k}_z: z = 1))$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

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$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - \mathbb{k} \wedge l_i + j_{sa} - s = l_{sa}$

$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4, \mathbb{k} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1))$

$$f_z^{S_{j_s, j^{sa}}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{ik}-k-j_{sa}^{lk}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D + s - n < l_i \leq (D + l_{sa} + s - n - j_{sa}))$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s < j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s + \mathbb{k}$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-k)}^{()} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - k)!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - k - j_{sa} - s - k)!} \cdot \frac{(n + j_{sa} - j_s)!}{(l_s - k - 1)!} \cdot \frac{(l_s - k + 1)!}{(l_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - k)!}{(D + j^{sa} + s - n - j_{sa} - k - j_{sa} - s - k)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

- $((D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$
- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
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- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
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- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
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- $(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^k, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k} = \dots) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

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$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$\sum_{k=1}^{l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1, \dots, \mathbb{k} \Rightarrow$$

$$f_z^{DSD} S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

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$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_s}^{DS} \sum_{k=1}^{D+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge$$

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$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-l_i} \sum_{(j_s+n-D-s+1)}^{(l_s+1)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()} \frac{(n_{ik}+j_{sa}^{ik}+j_{sa}-j_{sa}^{ik}-j_s-s-\mathbb{k})!}{(n_{ik}+j_{sa}^{ik}+j_{sa}-n-j_{sa}-\mathbb{k}-j_{sa}^s)! \cdot (n+j_{sa}^s-s-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

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$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_{z, j_{sa}}^{DSD} = \sum_{k=0}^{D+l_s-j_{sa}-n-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1 \wedge$$

$$(\mathbb{k}: z = 1))$$

$$f_z^D \binom{D}{j_s, j^{sa}} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{()}{(j_s=j_{sa}-j_{sa}+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{()}{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_{z=1}^{DSD} = \sum_{k=1}^{D+j_{sa}-n-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{l_s+j_{sa}-k} j^{sa=l_i+n+j_{sa}-D-s} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s < D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge l_i = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{i=j_{sa}-k}^{(n)} \sum_{j_{sa}+n-D}^{l_s+j_{sa}-k} \sum_{n_i=n+1}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_{is}=n+\mathbb{k}-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik} \quad (n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}))}^{(n_{ik}+j_{sa}^s-j_{sa}^{ik}-j_{sa}-j_s-s-\mathbb{k})!} \frac{(n_{ik}+j_{sa}^s-j_{sa}^{ik}-j_{sa}-j_s-s-\mathbb{k})!}{(n_{ik}+j_{sa}^s-j_{sa}^{ik}-j_{sa}-\mathbb{k}-j_{sa}^s)! \cdot (n+j_{sa}^s-s-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}^s+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$((D > n < n) \wedge I = \mathbb{k} > 0 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_{sa} - j_{sa} + 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{n_{ik} = n_{is} + j_{sa} - j_{sa}^{ik}}^{l_s + j_{sa} - n - l_{sa}} \sum_{(j_s = n - D - s + 1)}^{n - k - j_{sa}^{ik}} \sum_{j_{sa} = j_s + j_{sa} - 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa} - j_{sa}^{ik}} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j_{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j_{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{(j_s=l_s-k+1)}^{l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s-k+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{n-D-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{ik} + j_{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j_{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

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$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(l_s-D+1)}^{(l_s-1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{j_{sa}=j_s+j_{sa}-1} \sum_{j_s=j_s+1}^{j_s=j_s+1} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_{is}=n+\mathbb{k}-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{ik} + j_{sa}^{ik} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j_{sa}^{ik} + j_{sa}^{ik} - n_{sa} - j_{sa} - \mathbb{k} - j_s^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

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$$(l_s - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{i=0}^{D+j_{sa}-n-l_{sa}} \binom{D+j_{sa}-n-l_{sa}}{i} \sum_{k=0}^{l_s+j_{sa}-k} \binom{l_s+j_{sa}-k}{j_{sa}-i+k+n+j_{sa}-D-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \binom{D+j_{sa}-n-l_{sa}}{i} \binom{l_s+j_{sa}-k}{j_{sa}-i+k+n+j_{sa}-D-j_{sa}^{ik}} \frac{(n_{ik}+j_{sa}^s+j_{sa}^{ik}-j_{sa}-j_s-s-\mathbb{k})!}{(n_{ik}+j_{sa}^s+j_{sa}^{ik}-n-j_{sa}-\mathbb{k}-j_{sa}^s)! \cdot (n+j_{sa}^s-s-j_s)!} \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$(D > n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{D, j_s} = \sum_{j_s=l_{ik}+n-D-j_{sa}^{ik}+1}^{D+l_s+j_s-n-l_{sa}} \sum_{j_s=j_s+j_{sa}-1}^{(l_s-k+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} > D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} > D + l_s + j_{sa}^{ik} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} > D + l_s + j_{sa} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_i > D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$j_{sa}^s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = 0$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{SD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} + j_{sa}^s - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$S_{z,sa}^{D,sa} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)} \sum_{(j^{sa}=l_{sa}+n-D)}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$((D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{(j_s = j^{sa} - j_{sa} + 1)}^{D - \mathbf{n} + 1} \sum_{j_{sa} = \mathbf{l}_{ik} + \mathbf{n} + j_{sa} - D - j_{sa}^{ik}}^{\mathbf{l}_{ik} + j_{sa} - k - j_{sa}^{ik} + 1}$$

$$\sum_{n_i = \mathbf{n} + \mathbb{k}}^{\mathbf{n}} \sum_{(n_{is} = \mathbf{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa} + j_{sa}^{ik} - \mathbf{n} - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!}$$

$$\frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - \mathbf{l}_i)!}{(D + j_{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z \sum_{j_s=j_{sa}-1}^{D-n+1} \binom{D-n+1}{j_s} \sum_{j_{sa}=l_s+n+j_{sa}-D-1}^{l_s+j_{sa}-k} \binom{l_s+j_{sa}-k}{j_{sa}=l_s+n+j_{sa}-D-1} \sum_{n_i=n+\mathbb{k}}^n \binom{n_i-j_s+1}{n_i=n+\mathbb{k}-j_s+1} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}}^{(\cdot)} \binom{(\cdot)}{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(k + j_{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz \cdot c^{DSD} j_{sa} = \sum_{k=1}^{D-n+1} \sum_{l_i=j_{sa}-j_{sa}^{ik}}^{(l_i)} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{(l_i-k+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}+j_{sa}^s-j_{sa}^{ik}-s-\mathbb{k}-j_{sa}^s)!} \cdot \frac{(n_{sa}+j_{sa}^s-j_{sa}^{ik}-n-j_{sa}-\mathbb{k}-j_{sa}^s)! \cdot (n+j_{sa}-j_{sa}^s-s)!}{(l_s-k-1)! \cdot (l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_s \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{l_s=j_{sa}^s-k}^{l_s=j_{sa}^s-k} \sum_{l_i=j_{sa}^i-k}^{l_i=j_{sa}^i-k} \sum_{l_{sa}=j_{sa}-k}^{l_{sa}=j_{sa}-k} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}-j_{sa}^s)!}{(n_{ik}+j_{sa}^{ik}-n_{sa}-\mathbb{k}-j_{sa}^s)! \cdot (n+j_{sa}-j_{sa}^s-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$s \geq n < n \wedge l_s > D - j_{sa}^s + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa}^s \wedge$$

$$j_s + j_{sa} - j_{sa}^s \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_s - j_{sa}^{ik} - j_{sa}^i = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

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$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1, \dots, l_i+n+1, \dots, -D-s)}^{()} \frac{l_s^{a-k}}{\sum_{n_i=n+1, \dots, n+\mathbb{k}-j_s+1}^{n} \sum_{n_{ik}+j_{sa}-j_{sa}^{ik}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(n_i)} \frac{(n_i + j_{sa}^{ik} - s - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - n_{ik} - \mathbb{k} - j_s^s)! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$2 \leq j_{sa} - j_{sa} \wedge$

$j_{sa} - 1 \leq j_{sa} \leq n - j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 \leq l_i + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

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$s \geq 3 \wedge s = s) \vee$

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$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=l_{sa}+n-1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=0}^n \sum_{(n_i=j_s+1)}^{(n_i=j_s+1)} \sum_{n_{ik}=0}^{j_{sa}^{ik}} \sum_{(n_{sa}=n_i+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \frac{(n_{ik} + j_{sa}^{ik} - s - j_{sa})!}{(n_{ik} + j_{sa} + j_{sa} - n - j_{sa} - j_{sa} - j_{sa})! (n + j_{sa} - j_{sa} - s)!} \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \frac{(D - n_i)!}{(D + j_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_{sa} \leq j_{sa} - 1 \wedge$$

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$$l_{ik} + j_{sa}^{ik} + 1 = l_s \wedge n_i + j_{sa}^{ik} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\cdot)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{is}-j_{sa}^{ik}}^{(n_{sa}^{is}-j_{sa}^{ik}-\mathbb{k})} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^{is})!}{(n_{ik} + j_{sa}^{is} + j_{sa}^{ik} - n - j_{sa}^{is})! \cdot (n_{sa}^{is} - j_{sa}^{is} - s)!} \cdot \frac{(l_s - \mathbb{k} + 1)!}{(l_s - \mathbb{k} + 1)! \cdot (j_s - 2)!} \cdot \frac{(n - l_i)!}{(D + j_{sa}^{is} - s - n - l_i - \mathbb{k})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - 1$

$l_{ik} - \mathbb{k} + 1 = l_s, n_{is} + j_{sa}^{is} - j_{sa}^{ik} = n_{sa}^{is} + j_{sa} - s = l_{sa} \wedge$

$(n \geq n < n), \mathbb{k} = \mathbb{k} = \mathbb{k}$

$j_{sa}^{is} = j_{sa} - 1 \wedge$

$\{j_{sa}^{is}, \dots, j_{sa}^{is}, \dots, j_{sa}^{is}\} \wedge$

$s \geq 2, s = s$

$(D \geq n < n) \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^{is} \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^{is}, \mathbb{k}, j_{sa}, j_{sa}^{is}\} \vee s: \{j_{sa}^{is}, \dots, j_{sa}^{is}, \mathbb{k}, j_{sa}, \dots, j_{sa}^{is}\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \frac{(n_{ik} + j_{sa}^{ik} - s - k - j_{sa}^s)}{(n_{ik} + j_{sa}^{sa} + j_{sa}^{ik} - n - j_{sa} - k - j_{sa}^s)} \cdot \frac{(n + j_{sa} - j^{sa} - s)!}{(l_s - k - 1)!} \cdot \frac{(l_s - k + 1) \cdot (j_s - 2)!}{(D - k)!} \cdot \frac{(D - k)!}{(D + j_{sa} + s - n - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge l_s > D - n + 1) \wedge$$

$$j_s \leq j_{sa} - 1) \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^s\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, k, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + k \wedge$$

$$k_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{sa}^{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \frac{(n_{ik} + j_{sa}^{ik} - s - l_k - j_{sa}^s)}{(n_{ik} + j_{sa} + j_{sa}^{ik} - n - j_{sa} - l_k - j_{sa}^s)} \cdot \frac{(n + j_{sa} - j_{sa}^{ik} - s)!}{(l_s - k - 1)!} \cdot \frac{(l_s - k + 1) \cdot (j_s - 2)!}{(D - 1)!} \cdot \frac{1}{(D + j_{sa} + s - n - j_{sa}^{ik} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^{ik} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$

$((D > n < n \wedge l_s = 0 \wedge$

$j_{sa} \leq j_{sa} - 1) \vee$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^s\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l_s = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, l_k, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, l_k, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + l_k \wedge$

$l_{k_z}: z = 1) \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{sa}-k+1} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{sa}^{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \frac{(n_{ik} + j_{sa}^{ik} - s - l_k - j_{sa}^s)}{(n_{ik} + j_{sa} + j_{sa}^{ik} - n - j_{sa} - l_k - j_{sa}^s)} \cdot \frac{(n + j_{sa} - j_{sa}^{ik} - s)!}{(l_s - k - 1)!} \cdot \frac{(l_s - k + 1) \cdot (j_s - 2)!}{(D - 1)!} \cdot \frac{(D - 1)!}{(D + j_{sa} + s - n - j_{sa} - j_{sa}^{ik})! \cdot (n + j_{sa} - j_{sa}^{ik} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$$

$$((D - 1) < n \wedge l_s = 0 \wedge$$

$$j_{sa} \leq j_{sa} - 1) \vee$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^s\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_s = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, l_k, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, l_k, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + l_k \wedge$$

$$l_{k_z}: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)}{(n_{ik} + j_{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)} \frac{(n + j_{sa} - j_{sa}^s - s)!}{(l_s - \mathbb{k} - 1)!} \frac{(l_s - \mathbb{k} + 1) \cdot (j_s - 2)!}{(D - \mathbb{k})!} \frac{1}{(D + j_{sa} + s - n - j_{sa} - j_{sa}^s - s)!} \frac{1}{(n + j_{sa} - j_{sa}^s - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$

$((D > n < n \wedge l_s > D - n + 1) \wedge$

$j_{sa} \leq j_{sa} - 1) \wedge$

$s: \{j_s, \dots, j_{sa}, \dots, j_{sa}^s\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l_s > D - n + 1) \wedge$

$j_{sa} \leq j_{sa} - 1) \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_s+n+j_{sa}-D-1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \frac{(n_{ik} + j_{sa}^{ik} - s - k - j_{sa}^s)}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - k - j_{sa}^s)} \cdot \frac{(n + j_{sa} - j^{sa} - s)!}{(l_s - k - 1)!} \cdot \frac{(l_s - k + 1) \cdot (j_s - 2)!}{(D - k)!} \cdot \frac{(D - k)!}{(D + j^{sa} + s - n - j_{sa} - j^{sa} - j_{sa}^s) \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$j_s \leq j_{sa} - 1) \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^s\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, k, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + k \wedge$$

$$k_z: (z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_s+n+j_{sa}-D-1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{is}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{is})}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{is} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^{is} - j_{sa} - s)!}$$

$$\frac{(l - k - 1)!}{(l_s - j_s - k - 1)! \cdot (l - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - n - l_s - j_{sa})! \cdot (n - j_{sa} - j_{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

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$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - i_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = \dots \wedge$

$((D \geq n < n \wedge l = \mathbb{k} = 0$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = j_{sa} - 1$

$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s \leq s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1 \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_s+n+j_{sa}-D-1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{i_s}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^s)}^{(\quad)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^s + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$\frac{(l - k - 1)!}{(l_s - j_s - k - 1)! \cdot (l - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa}^s + s - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n - j_{sa} - j_{sa}^s - s)!}$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - i_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = \dots \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = j_{sa} - 1$$

$$(D - n < n \wedge l = \dots > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s \leq s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1 \dots \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_i-k-s+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^s + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

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$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - \mathbb{k} \wedge l_i + j_{sa} - s = l_{sa}$

$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4, \mathbb{k} = s + \mathbb{k} \wedge$

$(\mathbb{k}_z: z = 1))$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j_{sa}^s=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^s + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

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$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4, \mathbb{k} = s + \mathbb{k} \wedge$$

$$(\mathbb{k}_z: z = 1))$$

$$f_Z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}^s=j_s+j_{sa}-1}^{(n-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^s + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

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$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s = l_{sa}$

$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4, \mathbb{k} = s + \mathbb{k} \wedge$

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$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^s + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - \mathbb{k} \wedge l_i + j_{sa} - s = l_{sa}$

$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4, \mathbb{k} = s + \mathbb{k} \wedge$

$(\mathbb{k}_z: z = 1))$

$$f_z^{S_{j_s, j_{sa}^{DSD}}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{ik}-k-j_{sa}^{lk}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^s + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D + s - n < l_i \leq (D + l_{sa} + s - n - j_{sa}))$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s < j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k}$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \frac{(n_{ik} + j_{sa}^{ik} - s - k - j_{sa}^s)}{(n_{ik} + j_{sa} + j_{sa}^{ik} - n - j_{sa} - k - j_{sa}^s)} \cdot \frac{(n + j_{sa} - j^{sa} - s)!}{(l_s - k - 1)!} \cdot \frac{(l_s - k + 1) \cdot (j_s - 2)!}{(D - k)!} \cdot \frac{1}{(D + j_{sa} + s - n - j_{sa}^s) \cdot (n + j_{sa} - j^{sa} - s)!}$$

- $((D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$
- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$
- $(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^k, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k} = \dots) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^s + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{\mathbb{k}}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

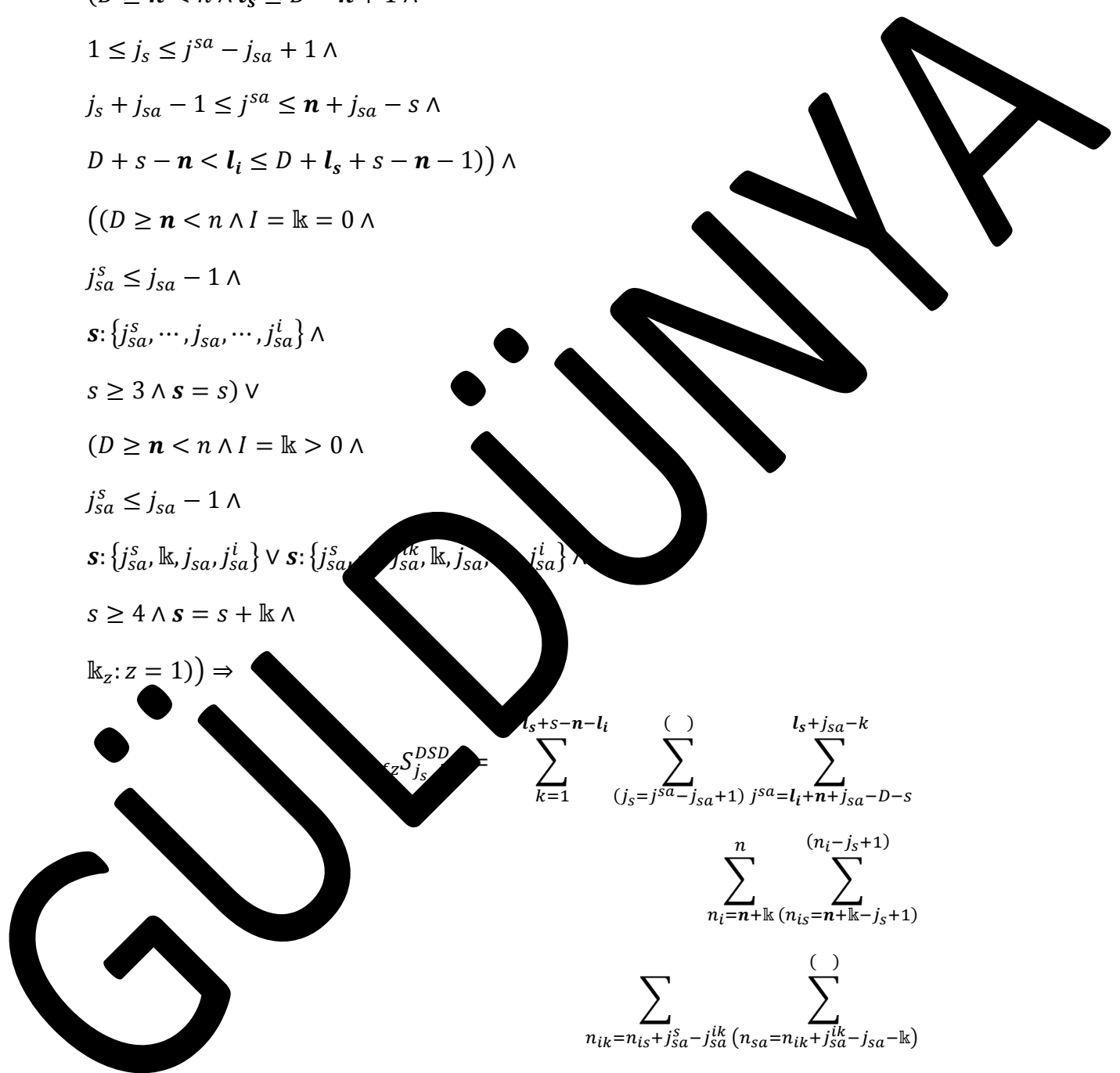
$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$= \sum_{k=1}^{l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^s + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1, \dots, \mathbb{k} \Rightarrow$$

$$f_z^{DSD} S_{j_s, j^{sa}} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n - l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DS} \sum_{k=1}^{D+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^s + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-l_i} \sum_{(j_s+n-D-s+1)}^{(l_s+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(n-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

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$$(D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z^{DSD} = \sum_{k=0}^{D+l_s-j_{sa}-n-s} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

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$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}: z = 1))$$

$$f_{z^D} S_{j_s, j^{sa}} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{(\quad)}{(j_s=j^{sa}-j_{sa}+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{(\quad)}{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^s + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_{j_s}^{DSD} = \sum_{k=0}^{D+j_{sa}-n-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{l_s+j_{sa}-k} j^{sa=l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s < D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s < D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge l_i = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{i=j_{sa}-k}^{()} \sum_{j_{sa}+n-D}^{l_s+j_{sa}-k} \sum_{n_i=n+1}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_{is}=n+\mathbb{k}-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik} \quad (n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}))}^{()}$$

$$\frac{(n_{ik})^{j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s}!}{(n_{ik} + j_{sa} + \mathbb{k} - n)^{j_{sa} - \mathbb{k} - j_{sa}^s}! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D > n < n) \wedge l_s = n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

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$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{n_i=n+\mathbb{k}}^{n+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-n-D-s+1)}^{n-k-j_{sa}^{ik}} \sum_{j_{sa}=j_s+j_{sa}-1} \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_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(k + j_{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^s + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

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$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{(j_s=l_s-k+1)}^{l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s-k+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(l_s-k+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(k + j_{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz^S_{j_s, j^{sa}} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(l_s-D-1)}^{(l_s-1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{j_{sa}=j_s+j_{sa}-1} \sum_{j_s+1}^{j_s+1} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_{is}=n+\mathbb{k}-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik})}^{(n_{ik}=n_{is}+j_{sa}^{ik})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{ik}+j_{sa}^{ik}-s-\mathbb{k}-j_{sa}^s)!}{(n_{ik}+j_{sa}^{ik}-n+l_{sa}-\mathbb{k}-j_{sa}^s)! \cdot (n+j_{sa}-j_{sa}^s-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$(l_s - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

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$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{i=0}^{D+l_s+j_{sa}-n-l_{sa}} \binom{D+l_s+j_{sa}-n-l_{sa}}{i} \sum_{k=0}^{l_s+j_{sa}-k} \binom{l_s+j_{sa}-k}{j_{sa}-i+k+n+j_{sa}-D-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \binom{D+l_s+j_{sa}-n-l_{sa}}{i} \binom{l_s+j_{sa}-k}{j_{sa}-i+k+n+j_{sa}-D-j_{sa}^{ik}} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D > n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{D, j_s, j_{sa}} = \sum_{j_s=l_{ik}+n-D-j_{sa}^{ik}+1}^{D+l_s+j_s-n-l_{sa}} \sum_{j_s=j_s+j_{sa}-1}^{(l_s-k+1)} j^{sa}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} > D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} > D + l_s + j_{sa}^{ik} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} > D + l_s + j_{sa} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_i > D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$j_{sa}^s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = 0$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

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$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{SD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

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$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}^{ik}) \wedge$

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$s \geq 4 \wedge s = s \wedge \mathbb{k} \wedge$

$\mathbb{k}_{2-2} = \dots \Rightarrow$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - lk)!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - lk - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! (l_s - 2)!}$$

$$\frac{(D - n + 1)!}{(D + j^{sa} + s - n - l_i - j_{sa})! (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_i \leq D + l_s + j_{sa}^{ik} - n - 1) \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

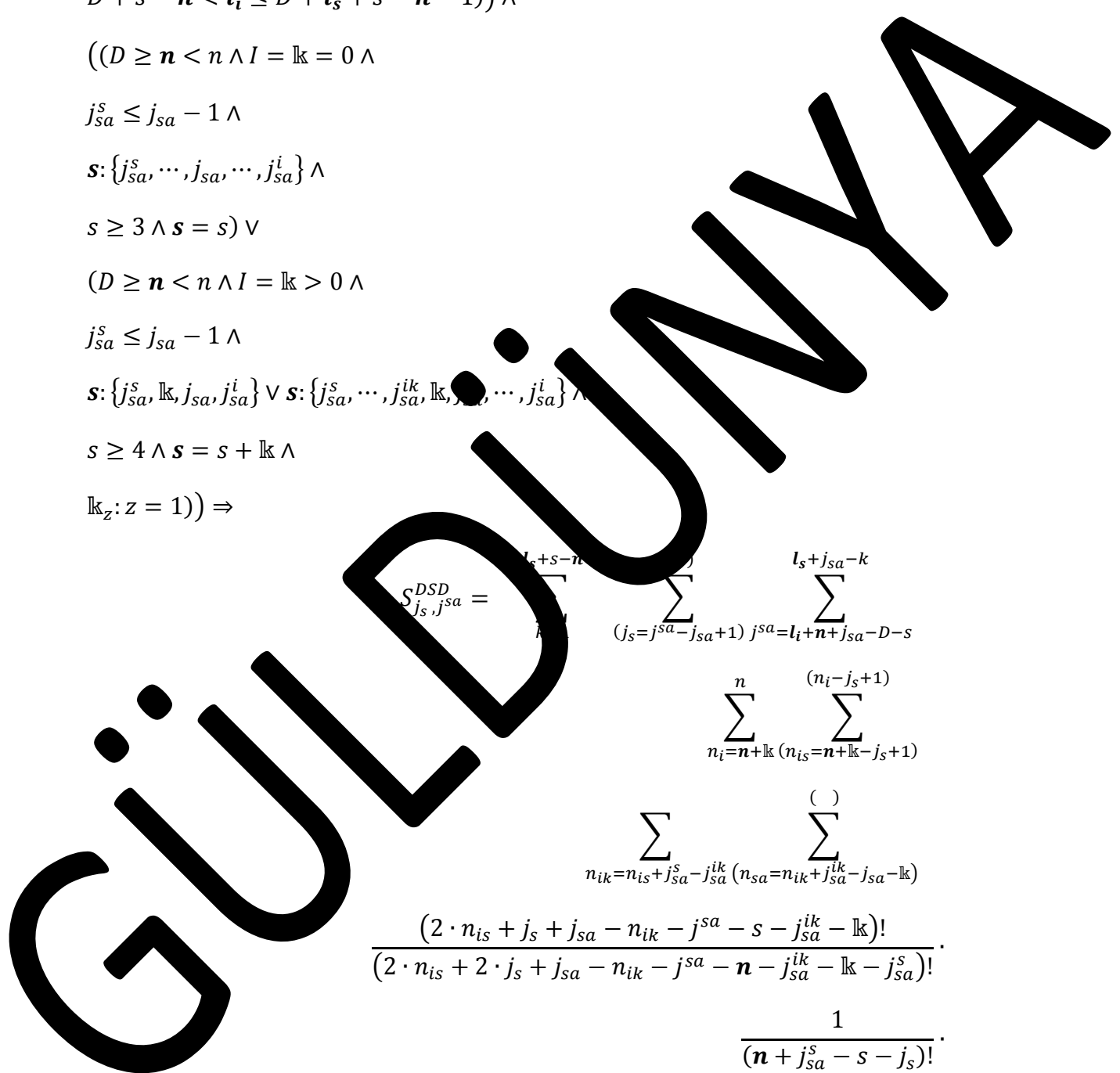
$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$S_{j_s, j_{sa}}^{DSD} = \sum_{(j_s=j^{sa}-j_{sa}+1)}^{l_s+s-n} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()} \frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$



$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz^{QSD}_{j_{sa}} = \sum_{k=1}^{D+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!} \cdot$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_{z, j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-l_i} \sum_{(j_s+n-D-s-1)}^{(l_s+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge l = k = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, k, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + k \wedge$$

$$k_z: z = 1, \dots, k \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{()}{(j_s=j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{()}{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{l_s+j_{sa}-k}^{()} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

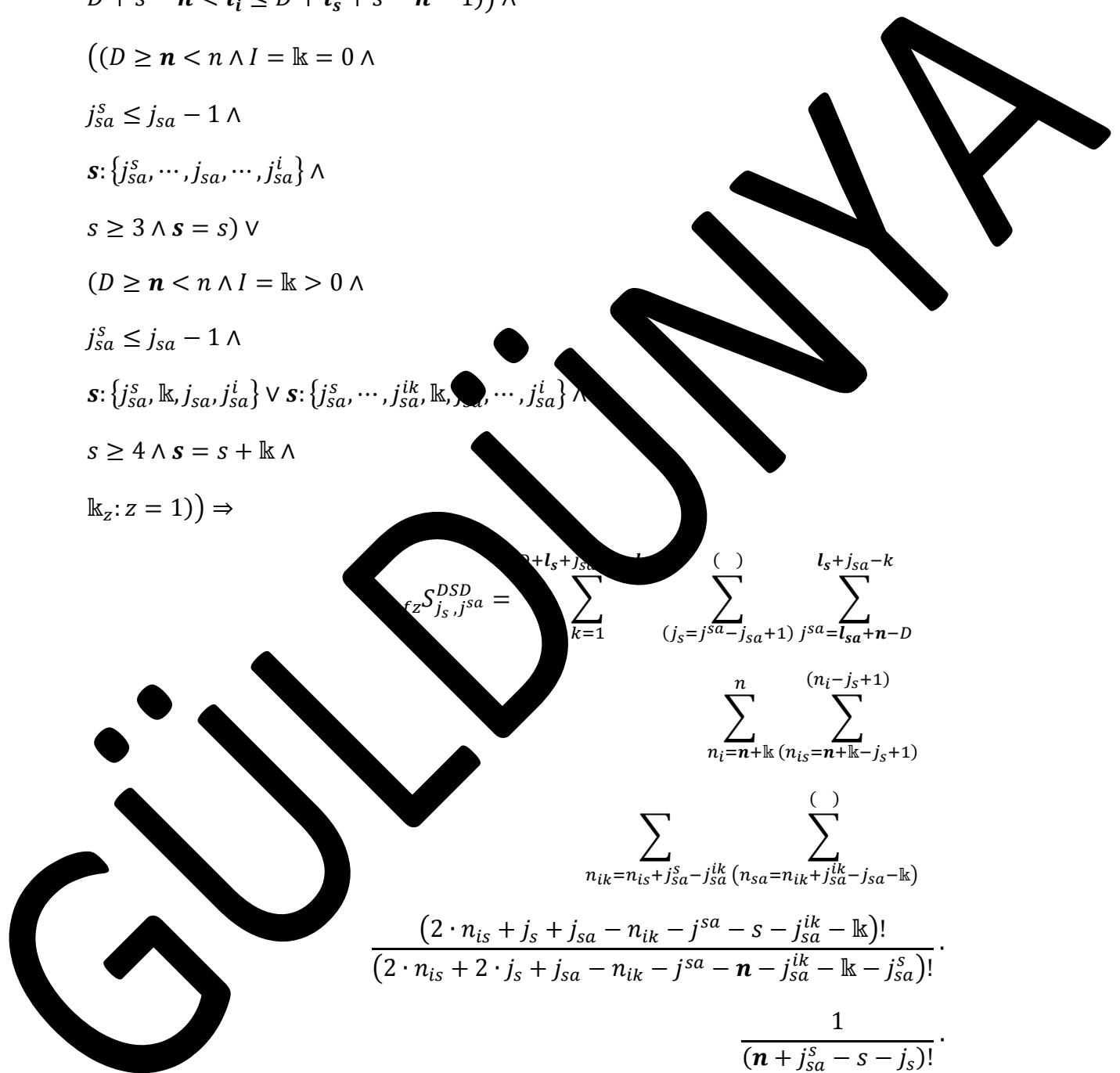
$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{DSD} S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{n+l_s+j_{sa}} \binom{()}{(j_s=j_{sa}-j_{sa}+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{()}{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$



$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + n - j_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}^i\}$$

$$s \geq 3 \wedge s = s) \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$j_{sa}^s \leq j_{sa} - 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - k)!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - k - j_{sa}^s)!}$$

$$\frac{(n - s - j_s)!}{(n - k - 1)!}$$

$$\frac{(n - j_s - n_{ik} - 1)! \cdot (j_s - 2)!}{(n - l_i)!}$$

$$\frac{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa} - a - s)!}{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa} - a - s)!}$$

$((D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k} = \dots) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}} \binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! (l_s - 2)!}$$

$$\frac{(D - n + 1)!}{(D + j^{sa} + s - n - l_i - j_{sa})! (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$((D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D + s - n < l_i \leq D + l_s + n - 2) \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}^i\}$

$s \geq 3 \wedge s = s) \wedge$

$(D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$(j_s = j_s) \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(n - s - j_s)!}{(n - s - j_s - \mathbb{k} - 1)!}$$

$$\frac{(n - j_s - n_{ik} - 1)! \cdot (j_s - 2)!}{(n - l_i)!}$$

$$\frac{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^{sa} - s)!}{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s < D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n - l_i \leq D + j_{sa}^{sa} + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s \geq 3 \wedge \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-n}^{(j_s+1)} \sum_{n_i=n}^{(j_s+1)} \sum_{n_{ik}=n}^{(j_s+1)} \sum_{(n_{sa}=n+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(j_s+1)} \frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j_{sa} - s - j_{sa}^{ik})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j_{sa} - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa}^s + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_s > D - l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa}^s + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} > D + l_s + j_{sa}^{ik} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} > D + l_s + j_{sa} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_i > D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$(\mathbb{k}_z: z = 1)) \Rightarrow$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$f_z^{SDSD}_{j_s, j^{sa}} = 0$$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_s-k)}^{(l_i+j_{sa}-s+1)} \sum_{n_i=n}^n \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_i-j_s+1)} \frac{(n_{sa} + \dots - j_s - s)!}{(j_s + j_{sa} - 1 - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$D > n < n \wedge l_s > \dots - n + 1$

$2 \leq j_s \leq j_{sa} - j_{sa} + 1$

$j_s + j_{sa} - 1 \leq j_{sa} < j_{sa} - s \wedge$

$l_{ik} + j_{sa}^{ik} - 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}^{s-k+1}}^{l_{sa}-k+1} \frac{(n_{i_s}+1) \dots (n_{i_s}+\mathbb{k}) (n_{i_s}+\mathbb{k}-1) \dots (n_{i_s}+1)}{(j_{sa}+j_{sa}-n_{i_s}+j_{sa}^s)! \cdot (j_{sa}+j_{sa}-s-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}$$

$$D \geq n < n \wedge l_s > n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1$$

$$j_s + j_{sa} - 1 \leq j_{sa} + j_{sa}$$

$$l_s - j_{sa} - 1 = l_s \wedge l_{sa} \wedge j_{sa}^i - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik})}^{()} \sum_{(n_{ik}+j_{sa}^{ik}-j_{sa}^{ik})}^{()} \frac{(j_s - k - 1)!}{(j_s - j_s - k + 1)! \cdot (j_s - 2)!} \frac{(D - k)!}{(j_s + s - n - l_i - j_s - k)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_s - 1 \leq j^{sa} - n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 \leq l_{ik} \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$((D - n < n \wedge I = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\}$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_Z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_s+n+j_{sa}-D-1}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-\mathbb{k})}^{()} \frac{(n_{sa}+j^{sa}-j_s)!}{(n_{sa}+j^{sa}-n-j_{sa}^{s})! \cdot (n+j_{sa}-j_s)!} \cdot \frac{(l_s-\mathbb{k}-1)!}{(l_s-\mathbb{k}+1)! \cdot (j_s-2)!} \cdot \frac{(D-\mathbb{k})!}{(D+j^{sa}+s-n-j_{sa}-j_s) \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge l_{sa} - \mathbb{k} = 0 \wedge$$

$$j_s \leq j_{sa} - 1 \wedge$$

$$s: \{j_s, \dots, j_{sa}, \dots, j_s\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_{sa} - \mathbb{k} > 0 \wedge$$

$$j_s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}, \mathbb{k}, j_s, j_{sa}\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_s^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$(\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\)}$$

$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - n - l_s - j_{sa})! \cdot (n_{sa} - j_{sa} - j^{sa} - 1)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge n_{sa} + j_{sa} - s = n_{ik} \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0) \vee$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s\} \wedge$

$s > 3 \wedge s = s + \mathbb{k} \vee$

$(D > n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_s\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge s = s + \mathbb{k} \wedge$

$(\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk} \binom{()}{(n_{sa}+j^{sa}-j_s-s)!} \cdot \frac{(n_{sa}+j^{sa}-j_s-s)!}{(n_{sa}+j^{sa}-n-j_{sa}^s)! \cdot (n+j_{sa}^s-s-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-l_s)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}^s-j^{sa}-s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$((D \geq n < n \wedge l = lk = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = lk > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, lk, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + lk \wedge$$

$$lk_z: z = 1)$$

$$f_Z^{S_{j_s, j^{sa}}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)} \binom{()}{j^{sa}=l_i+n+j_{sa}-D-s} \sum_{l_s+j_{sa}-k} \sum_{n_i=n+lk}^n \sum_{(n_i=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk} \binom{()}{(n_{sa}+j^{sa}-j_s-s)!} \cdot \frac{(n_{sa}+j^{sa}-j_s-s)!}{(n_{sa}+j^{sa}-n-j_{sa}^s)! \cdot (n+j_{sa}^s-s-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-l_s)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}^s-j^{sa}-s)!}$$

$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s = j^{sa} - j_{sa} + 1)}^{(\quad)} \sum_{j^{sa} = l_{sa} + n - D}^{l_i + j_{sa} - k - s + 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{(\quad)}$$

$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$\sum_{z=1}^{DSD} S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$\mathbb{k}_z S_{z, a}^{D, a} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{(j_s=j^{sa}-j_{sa}+1)}^{D-n+1} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()} \frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_s-k)}^{l_{sa}-k+1} \sum_{j_{sa}=l_{ik}+\mathbf{n}+j_{sa}-D-j_{sa}^{ik}} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\)} \frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_{sa}^s}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{\substack{0 \leq j_{sa} - j_{sa} + \dots + j_{sa} - j_{sa} \\ a = l_{ik} + n + j_{sa} - D - j_{sa}^{ik}}} \sum_{\substack{0 \leq l_s - k \\ l_s = l_i + j_{sa} - s - j_{sa}^s}} \sum_{n_i = n + \mathbb{k}}^n \sum_{n_{is} = n + \mathbb{k} - j_s + 1}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \sum_{n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}}^{(\quad)} \frac{(n_{sa} + j_{sa} - j_s - s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{i=0}^{\binom{()}{j_{sa}^s - j_{sa} + 1}} \sum_{l_i=0}^{l_i + j_{sa} - 1} \sum_{j_s=0}^{j_s + 1} \sum_{j_{sa} = n + j_{sa} - D - 1}^{j_{sa} + \mathbb{k} (n_{is} = n + \mathbb{k} - j_s + 1)} \sum_{j_{sa}^{ik} = n_{is} + j_{sa}^{ik}}^{j_{sa}^{ik}} \sum_{n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}}^{\binom{()}{n_{sa} + j_{sa} - j_s - s}} \frac{(n_{sa} + j_{sa} - j_s - s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s > D - j_{sa} + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s - j_{sa}^s \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1) \wedge l_s=l_s+n+j_{sa}-D-1}^{()} \frac{l_s^{k+1}}{\sum_{n_i=n+l_s}^n \sum_{j_s=n+\mathbb{k}-j_s+1}^{(n_i)} \sum_{n_{ik}+j_{sa}-j_{sa}^i=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} (n_{sa}+j_{sa}-j_s-s)!} \cdot \frac{(n_{sa}+j_{sa}-n-j_s)! \cdot (n+j_{sa}-s-j_s)!}{(l_s-k-1)!} \cdot \frac{(l_s-j_s-k+1)! \cdot (j_s-2)!}{(D-l_i)!} \cdot \frac{(D-l_i)!}{(D+l_{sa}+n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}$$

$$(D \geq n < n \wedge I = \mathbb{k} > D - n + 1 \wedge$$

$$2 \leq i \leq j_{sa} - j_{sa} - 1 \wedge$$

$$i + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_i \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_s+n+j_{sa}-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \dots$$

$$\frac{(n_{sa} + j_{sa}^s - j_s - 1)!}{(n_{sa} + j_{sa}^s - j_s - 1)! \cdot (n - j_{sa}^s - 1)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - i)!}{(D + j_{sa}^s - n - i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - 1 \wedge$$

$$j_s - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} + j_{sa}^{ik} + 1 = l_s, j_{sa} + j_{sa}^{ik} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z^{SDSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \frac{\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}^{ik}=n_{sa}+j_{sa}^{ik}-\mathbb{k})}^{(n_{sa}+j_{sa}^{ik}-i-s)!}}{(n_{sa}+j_{sa}^{s}-n-j_{sa}^s)! \cdot (n_{sa}+j_{sa}^{s}-s-j_{sa}^s)!} \cdot \frac{(n_{sa}+j_{sa}^{ik}-i-s)!}{(l_s+n_{is}-k+1) \cdot (n_{is}-s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}^{s}+s-n-l_i-j_{sa}^s)! \cdot (n_{sa}+j_{sa}^{s}-j_{sa}^s-s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - 1 \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s + j_{sa}^{s} + j_{sa}^{ik} - j_{sa}^{s} - j_{sa}^{ik} \wedge l_{ik} + j_{sa} - s = l_{sa} \wedge$

$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s + \mathbb{k} \wedge$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^{s})! \cdot (n + j_{sa} - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - 1)!}{(D + j^{sa} + s - n - l_s - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge l_s - \mathbb{k} = 0 \wedge$

$j_s \leq j_{sa} - 1 \wedge$

$s: \{j_s, \dots, j_{sa}, \dots, j_{sa}\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge s = \mathbb{k} > 0 \wedge$

$j_{sa}^s \neq j_{sa} - 1 \wedge$

$s: \{j_{sa}, \mathbb{k}, j_s, j_{sa}\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_s-j_{sa}-\mathbb{k})} \frac{(n_{sa}+j^{sa}-j_s)!}{(n_{sa}+j^{sa}-n-j_{sa})!} \frac{(n+j_{sa}^s-j_s)!}{(n+j_{sa}-j_s)!} \frac{(l_s-\mathbb{k}-1)!}{(l_s-\mathbb{k}+1) \cdot (j_s-2)!} \frac{(D-n)!}{(D+j^{sa}+s-n-j_{sa})!} \frac{1}{(n+j_{sa}-j^{sa}-s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$((D > n < n \wedge l_s > D - n + 1) \vee (D > n < n \wedge l_s = D - n + 1) \vee (D > n < n \wedge l_s < D - n + 1)) \wedge$$

$$j_s \leq j_{sa} - 1 \wedge$$

$$s: \{j_s^s, \dots, j_{sa}, \dots, j_{sa}^s\} \wedge$$

$$s \geq 3 \wedge s = s \vee$$

$$(D \geq n < n \wedge l_s = D - n + 1) \wedge$$

$$j_s \leq j_{sa} - 1 \wedge$$

$$s: \{j_s^s, \mathbb{k}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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$((D \geq n < n \wedge l_s - \mathbb{k} = 0 \wedge$

$j_s \leq j_{sa} - 1 \wedge$

$s: \{j_s, \dots, j_{sa}, \dots, j_s\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l_s - \mathbb{k} > 0 \wedge$

$j_{sa}^s \neq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_s, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\quad)}$$

$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - n - l_s - j_{sa}^s)! \cdot (n_{sa} - j^{sa} - j_{sa}^s - 1)!}$$

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$$((D \geq n < n \wedge I = \mathbb{k} = 0) \vee$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = \mathbb{k} \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\cdot)} \frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \dots)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - \dots - s)!}}$$

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$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$

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$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_s^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\cdot)}$$

$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

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$$s \geq 3 \wedge s = s) \vee$$

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$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

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$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

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$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

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$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

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$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

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$$\mathbb{k}_z: z = 1)) \Rightarrow$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot$$

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$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

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$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$\sum_{k=1}^{n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} \sum_{k=1}^{D-n} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k-s+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z \sum_{j_s, j_{sa}}^{DSL} \sum_{i=1}^{D-n+1} \sum_{(j_s=l_{ik}+1)}^{k-j_{sa}+1} \sum_{D-j_{sa}^{ik}+1}^{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{cDSD} j_{sa}^{sa} = \sum_{k=1}^{D-n+1} \sum_{l_i = l_{ik} + n - j_{sa}^{ik} + 1}^{l_s} j_{sa}^{sa} = j_{sa}^{sa} - 1$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{()}$$

$$\frac{(n_{sa} + j_{sa} - j_s - s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{i=1}^{D-n+1} \sum_{j_s=l_s+n}^{\binom{k-s+2}{j_s}} \sum_{j_{sa}=j_s+j_{sa}-1}^{\binom{k-s+2}{j_s}} \sum_{j_s+1}^{\binom{k-s+2}{j_s}} \sum_{j_{sa}+\mathbb{k}}^{\binom{k-s+2}{j_s}} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{\binom{k-s+2}{j_s}} \sum_{j_{sa}^{ik}=n_{is}+j_{sa}^{ik}}^{\binom{k-s+2}{j_s}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{\binom{k-s+2}{j_s}} \frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa})! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - l_i + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - l_i + 1 \wedge$$

$$j_s - j_{sa} - l_i \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_i = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+\dots+n)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j_{sa}=j_{sa}-1}^{j_{sa}-1} \sum_{n_i=n+l_s+\dots+n}^{n} \sum_{n_{i_s}=n+\mathbb{k}-j_s+1}^{(n_{i_s})} \frac{(n_{sa} - j_{sa} - s)!}{(n_{sa} - j_{sa} - n - j_s)! \cdot (n + j_{sa} - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - l_i - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq n < n \wedge I = \mathbb{k} > D - n + 1 \wedge$$

$$2 \leq i \leq j_{sa} - j_{sa} - 1 \wedge$$

$$i + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_i \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \binom{l_{ik}-k-j_{sa}^{ik}+2}{(j_s+l_s+n-D)} \sum_{j_{sa}=j_s+j_{sa}-} \sum_{n_i=n}^n \frac{(n_{sa}+j_{sa}-j_s-1)!}{(n_{sa}+j_{sa}-j_s-1)!} \cdot \frac{(l_s-k-1)!}{(l_s+j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-n_i)!}{(D+j_{sa}-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1$$

$$2 \leq j_s \leq j_{sa} - j_{sa} \wedge$$

$$j_s - j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} \wedge$$

$$j_s - j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-j_s+1)}^{()} \sum_{j_{sa}=l_i+n+j_s-s}^{l_{sa}-1} \sum_{n_i=n}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_s-j_{sa})}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()} \frac{(n_{sa} + \dots - j_s - s)!}{(j_s + j_{sa} - 1 - j_{sa})! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$((D > n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{sa} - j_{sa} + 1$

$j_s + j_{sa} - 1 \leq j_{sa} < n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$

$(D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s > D - n + 1 \wedge$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa})$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \frac{(n_{sa} + j^{sa} - i - s)!}{(n_{sa} + j^{sa} - i - j_{sa}^s)! \cdot (n_{sa} + j^{sa} - s - j_{sa}^s)!} \cdot \frac{(i-k)!}{(l_s - i - k + 1)! (i - s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} - i - s - n - l_i - 1)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

- $((D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$
- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: \dots) \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}} \frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l_s)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa}^s - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s > l_s \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D + s - n < l_i \leq (D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{(n_{sa}-j_{sa}^{ik})} \frac{(n_{sa} + j^{sa} - j_{sa}^{s})!}{(n_{sa} + j^{sa} - n - j_{sa}^{s})! \cdot (n + j_{sa} - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^k, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k} = \dots) \Rightarrow$$

$$f_{zS}^{DSD}_{j_s, j_{sa}} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk)}^{()}}{(n_{sa}+j^{sa}-j_s-s)! \cdot (n+j_{sa}^s-s-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-l_s)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}^s-j_{sa}-s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s < D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S^{D, s, a} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1, \dots, \mathbb{k} \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$((D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D + s - n < l_i \leq D + l_s + n - 1) \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0) \vee$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^i\}$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^s, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$(j_s = j_s) \Rightarrow$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{()}{(j_s=j^{sa}-j_{sa}+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{i_s}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{()}$$

$$\frac{(n_{sa}+j^{sa}-j_s-s)!}{(n_{sa}+j^{sa}-n-j_{sa}^s)! \cdot (n+j_{sa}^s-s-j_s)!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-1)! \cdot (l_s-2)!}$$

$$\frac{(D-l_i)}{(D+j^{sa}+s-n-l_s-j_{sa})! \cdot (n-l_s-j_{sa}-j^{sa}-s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

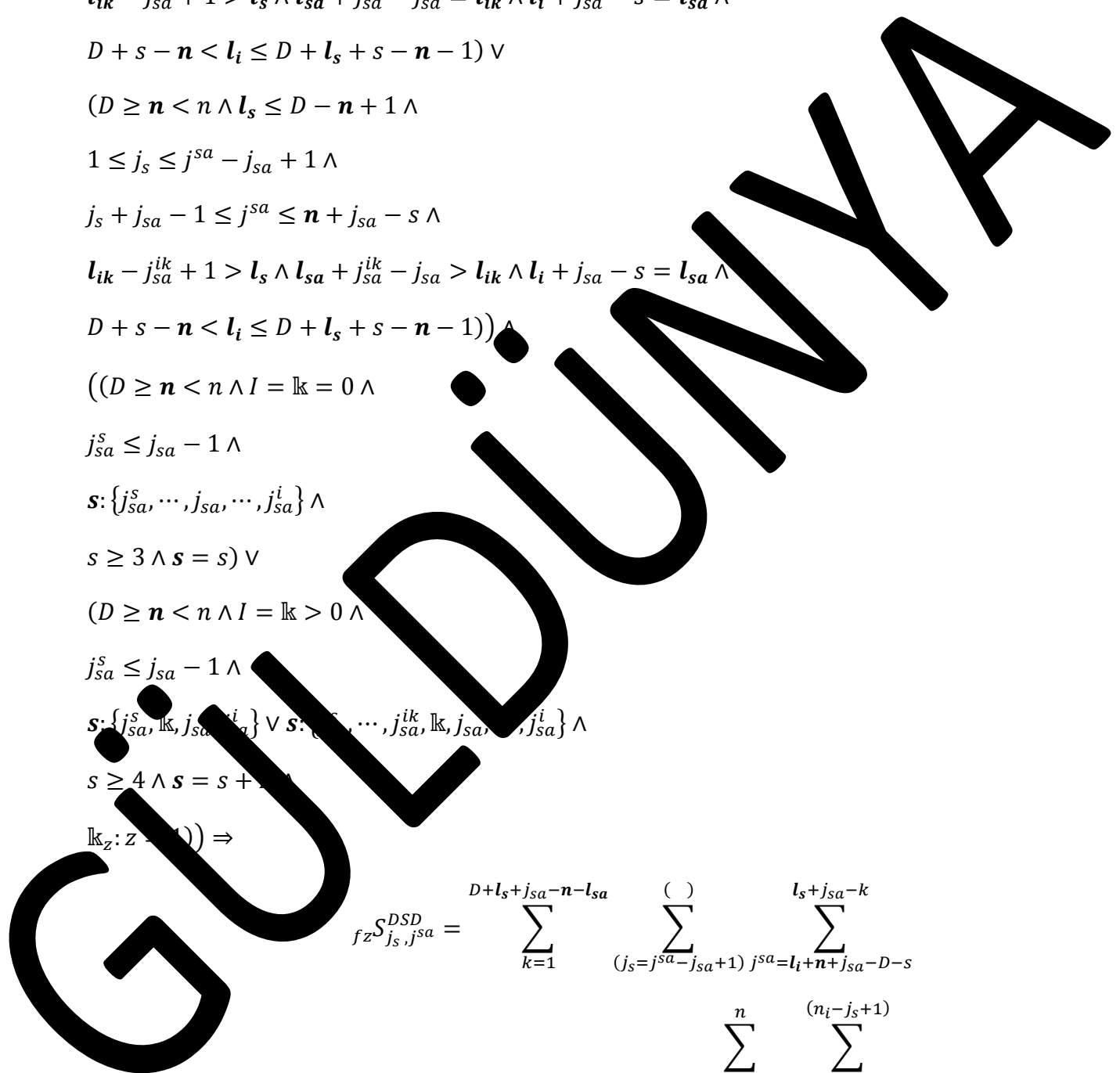
$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1) \vee$$

$$(\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$



$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{DSD} j_{sa} = \sum_{k=1}^{D-j_{sa}-n-l_{sa}} \binom{()}{(j_s=j_{sa}-j_{sa}+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_i+j_{sa}^s-j_{sa}^{ik}} \binom{()}{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1 \wedge$$

$$(\mathbb{k}: z = 1))$$

$$fz^{SD} j_s, j^{sa} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \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_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\)} \frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$((D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

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$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

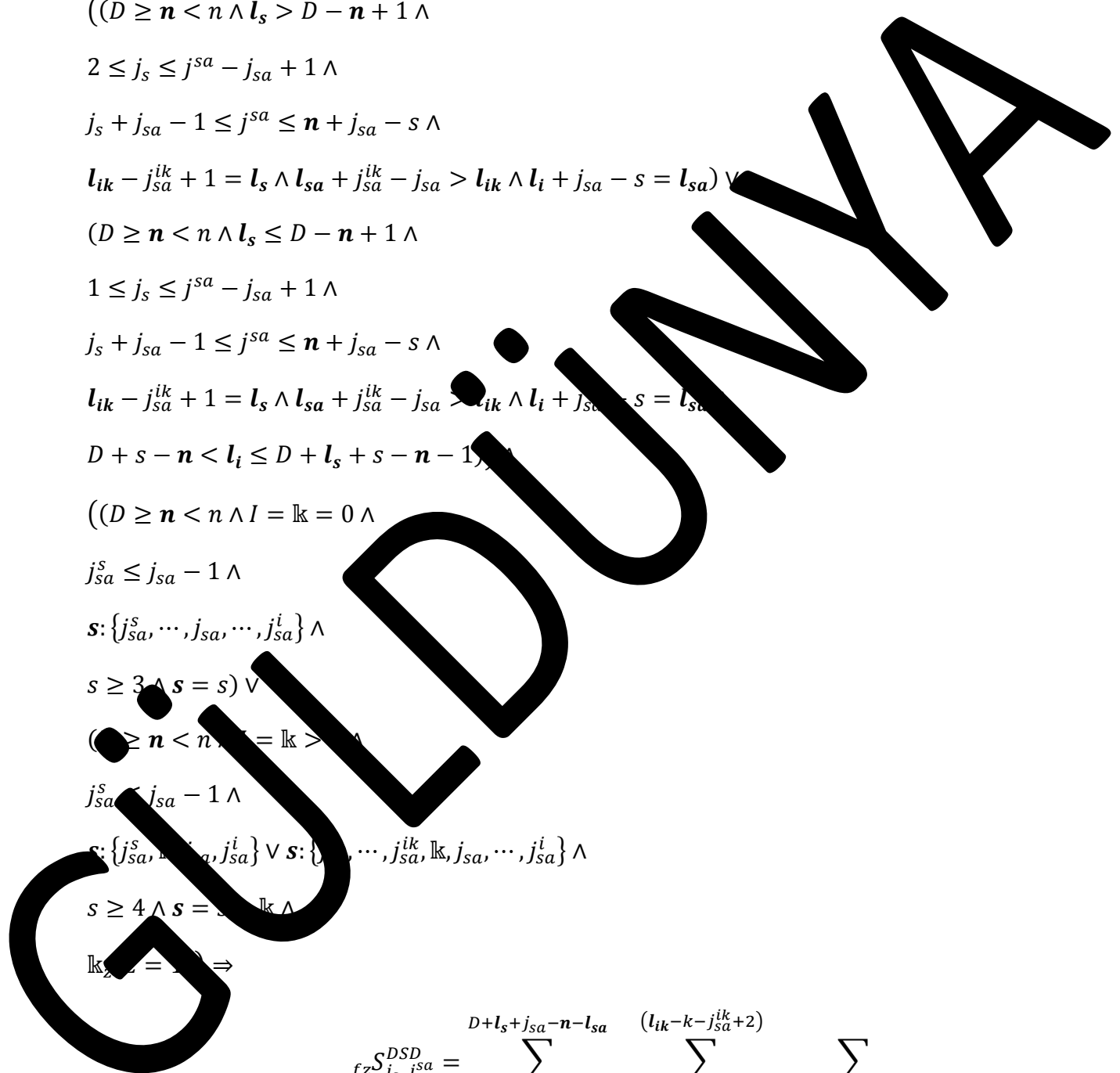
$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s \wedge \mathbb{k} \wedge$

$\mathbb{k}_{2-2} = \mathbb{k} \Rightarrow$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$



$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}} \frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_s \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1 \wedge$$

$$\mathbb{k}: z = 1) \wedge$$

$$f_{z=1}^{D, j_s, j_{sa}} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$(D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z^{DSD} = \sum_{k=0}^{D+l_s-j_{sa}-n-j_{sa}^{ik}+1} \sum_{j_s=l_{sa}+n-D-j_{sa}+1}^{j_s=j_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(n_{sa}+j_{sa}^{ik}-j_s-s)} \frac{(n_{sa}+j_{sa}^{ik}-j_s-s)!}{(n_{sa}+j_{sa}^{ik}-n-j_{sa}^s)! \cdot (n+j_{sa}^s-s-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

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$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_{z=1}^{SD} = \sum_{k=1}^{D+l_s-j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1, \dots, \mathbb{k} \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa}^s)! \cdot (n + j_{sa} - j^{sa} - j_s - s)!}$$

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$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} > D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} > D + l_s + j_{sa}^{ik} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} > D + l_s + j_{sa} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_i > D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$j_{sa}^s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = 0$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{SD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{l_i+j_{sa}-k-s+1}^{l_i+j_{sa}-k-s+1} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$\mathbb{k}_z S_{z, sa}^{D, sa} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{(j_s=j^{sa}-j_{sa}+1)}^{D-n+1} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$\begin{aligned} & f_z \sum_{j_s, j_{sa}}^{DS} \sum_{k=1}^{D-n+1} \binom{l_s + j_{sa} - k}{j_s = j_{sa} - k + 1} j_{sa} = l_s + \mathbf{n} + j_{sa} - D - 1 \\ & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\ & \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{(\cdot)} \\ & \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa} - s - j_{sa}^s)!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(D - l_i)!}{(D + j_{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} \end{aligned}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{cDSD} j_{sa}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{l_i=j_{sa}-j_{sa}^{s-k}}^{j_{sa}-j_{sa}^{s-k+1}} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{j_{sa}=l_i+n+j_{sa}-D-s} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{i_s=0}^{(j_{sa}-j_{sa}^s)+1} \sum_{i_{ik}=0}^{l_{ik}+j_{sa}-i_s+1} \sum_{i_{is}=0}^{i_s+1} \sum_{i_{ik}+\mathbb{k}}^{(n_{is}+n+\mathbb{k}-j_s+1)} \sum_{i_{ik}+\mathbb{k}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} - j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge l_s > D - j_{sa}^s + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s \wedge$$

$$j_s - j_{sa}^s \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1, \dots, l_i+n+1, \dots, -D-s)}^{()} \frac{l_s^{a-k}}{\sum_{n_i=n+1, \dots, n+\mathbb{k}-j_s+1}^{(n)} \sum_{n_{ik}+j_{sa}-j_{sa}^s=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(n)}} \cdot \frac{(n_{sa} + \dots - s - j_{sa}^s)!}{(n_{sa} + \dots - n - j_s^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + \dots - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$2 \leq i \leq j_{sa} - j_{sa} - 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_i \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{sa}+n-1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=1}^n \sum_{(n_{sa}=n+1-j_s+1)}^{(n-j_s+1)} \sum_{n_{ik}=1}^{j_{sa}^{ik} (n_{sa}=n+1-j_s+1)}^{()} \sum_{(n_{sa}=n+1-j_s+1)}^{()} \frac{(n_{sa} + \dots - s - j_{sa})!}{(n_{sa} + j_{sa} - n - j_{sa})! (n + j_{sa} - s - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - i)!}{(D + j_{sa} - n - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1$$

$$2 \leq j_s \leq j^{sa} - j_{sa} - 1 \wedge$$

$$j_{sa} - 1 \leq j^{sa} \leq n - j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s - j_{sa} + j_{sa}^{ik} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\cdot)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{is}-j_{sa}^{ik}}^{(n_{sa}+j_{sa}^{is}-j_{sa}^{ik})} \sum_{(n_{is}+j_{sa}^{is}-j_{sa}^{ik})}^{(n_{sa}+j_{sa}^{is}-j_{sa}^{ik})} \frac{(n_{sa}+j_{sa}^{is}-j_{sa}^{ik})!}{(n_{sa}+j_{sa}^{is}-n-j_{sa}^{is})! \cdot (n_{sa}+j_{sa}^{is}-s-j_{sa}^{is})!} \cdot \frac{(n_{sa}+j_{sa}^{is}-k)!}{(l_{sa}+j_{sa}^{is}-k+1)! \cdot (l_{sa}-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}^{is}-s-n-l_i)! \cdot (n+j_{sa}^{is}-j_{sa}^{is}-s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - 1 \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_{sa} + j_{sa}^{ik} - j_{sa} - j_{sa}^{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$(D \geq n < n \wedge l_s = \mathbb{k} = 1 \wedge$

$j_{sa}^s = j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s,$

$(D \geq n < n \wedge l_s = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \frac{(n_{sa}+j_{sa}-s-j_{sa}^{ik})!}{(n_{sa}+j_{sa}-n-j_{sa}^{s})(n+j_{sa}-j_{sa}^{s})!} \frac{(l_s-\mathbb{k}-1)!}{(l_s-\mathbb{k}+1)! \cdot (j_s-2)!} \frac{(D-\mathbb{k})!}{(D+j_{sa}+s-n-j_{sa})(n+j_{sa}-j_{sa}^{s}-s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge l_{ik} = 0 \wedge$

$j_s \leq j_{sa} - 1 \wedge$

$s: \{j_s, \dots, j_{sa}, \dots, j_s\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l_{ik} = \mathbb{k} > 0 \wedge$

$j_s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}, \mathbb{k}, j_s, j_{sa}\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\)}$$

$$\frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j_{sa} + s - n - l_s - j_{sa})! \cdot (n_{sa} + j_{sa} - j_{sa}^s - 1)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge n_{sa} + j_{sa} - s = n_{ik} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \vee$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\)} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\cdot)} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}}{1}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

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$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_i + j_{sa} - s = l_s \wedge$

$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_s^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\cdot)} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}^{(\cdot)} \frac{(n_{sa}+j_{sa}-s-j_{sa}^s)!}{(n_{sa}+j_{sa}-n-j_{sa}^s)! \cdot (n+j_{sa}-s-j_{sa}^s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-k+1)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}}{1}$$

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$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

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$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\cdot)} \sum_{j_{sa}=l_s+n+j_{sa}-D-1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}^{(\cdot)}$$

$$\frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa}^s)!}$$

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$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa} - s - j_{sa}^s)!}$$

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$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

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$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$j_s, j^{sa} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_s+n+j_{sa}-D-1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

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$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$\sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_i-k-s+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} \sum_{k=1}^{D-n} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-j_{sa}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

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$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

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$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} \sum_{i=1}^{D-n+1} \sum_{(j_s=\mathbf{l}_{ik}+1, \dots, D-j_{sa}^{ik}+1)} \sum_{j_{sa}^s=j_s+j_{sa}-1}^{(n-k-j_{sa}^{ik}+1)} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\)} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \mathbf{l}_i)!}{(D + j_{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa}^s - s)!}$$

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$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{S_{j_s, j_{sa}}} = \sum_{k=1}^{D-n+1} \sum_{(j_s+n-D)}^{(j_s-1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(j_s-1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}+j_{sa}-s-j_{sa}^s)}$$

$$\frac{(n_{sa}+j_{sa}-s-j_{sa}^s)!}{(n_{sa}+j_{sa}-n-j_{sa}^s)! \cdot (n+j_{sa}-s-j_{sa}^s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

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$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{i=l_i+n-D-s}^{(l_{sa}-j_{sa}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(j_s+1)} \sum_{j_{sa}+\mathbb{k} (n_{is}=n+\mathbb{k}-j_s+1)} \sum_{j_{sa}^{ik}=n_{is}+j_{sa}^{ik}} \sum_{j_{sa}^{ik} (n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{sa}+j_{sa}-s-j_{sa}^s)!}{(n_{sa}-j_{sa}-n-j_{sa}^s)! \cdot (n+j_{sa}-s-j_{sa}^s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$D \geq n < n \wedge l_s > D - j_{sa} + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa}^s + 1 \wedge$$

$$j_s - j_{sa}^s \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-k)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{(j_{sa}=j_{sa}-1)}^{(j_{sa}-1)} \sum_{(n_i=n+\mathbb{k})}^{(n_i)} \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i)} \sum_{(n_{ik}=n+j_{sa}-j_{sa}^{ik})}^{(n_{ik})} \sum_{(n_{ik}=n+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{ik})} \frac{(n_{sa} + \dots - s - j_{sa}^s)!}{(n_{sa} + \dots - n - j_s^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - n_{sa} - \dots - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge I = \mathbb{k} > D - n - 1 \wedge$$

$$2 \leq j_{sa}^s \leq j_{sa} - j_{sa} - 1 \wedge$$

$$j_{sa} + j_{sa} - 1 \leq j_{sa}^s \leq n \wedge j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{ik} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}} \sum_{n_i=0}^n \sum_{(j_s-k+1)}^{(j_s+1)} \sum_{(n_{sa}=n+j_{sa}-j_s-k)}^{(j_s+1)} \frac{(n_{sa} + j_{sa} - s - j_{sa})!}{(n_{sa} + j_{sa} - s - j_{sa})!} \cdot \frac{(n + j_{sa} - s - j_{sa})!}{(n + j_{sa} - s - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - i)!}{(D + j_{sa} - n - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1$$

$$2 \leq j_s \leq j_{sa} - 1 \wedge$$

$$j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} + j_{sa} + 1 = l_s + j_{sa} + j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \frac{(n_{sa} + j_{sa} - j_{sa}^s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n_{sa} + j_{sa} - s - j_{sa}^s)!} \frac{(n_{sa} + j_{sa} - k - j_{sa}^s)!}{(l_s + j_{sa} - k + 1) \cdot (n_{sa} + j_{sa} - s - 2)!} \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa}^s)! \cdot (n_{sa} + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - 1 \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s + j_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_{ik} + j_{sa} - s = l_{sa} \wedge$

$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s + \mathbb{k} \wedge$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_{sa}^{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{(n_{sa}+j_{sa}-s)} \frac{(n_{sa}+j_{sa}-s)!}{(n_{sa}+j^{sa}-n-j_{sa}^s) (n+j_{sa}-j_{sa}^{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \frac{(D-n+1)!}{(D+j^{sa}+s-n-j_{sa}^s) (n+j_{sa}-j^{sa}-s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge l_s = 0 \wedge$

$j_s \leq j_{sa} - 1 \wedge$

$s: \{j_s, \dots, j_{sa}, \dots, j_{sa} \} \wedge$

$s \geq 3 \wedge s = s \vee$

$(D \geq n < n \wedge l_s = k \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, k, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, k, j_{sa}^i, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + k \wedge$

$k_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^s)}^{(\quad)}$$

$$\frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j_{sa} + s - n - l_s - j_{sa})! \cdot (n_{sa} + j_{sa} - j_{sa}^s - 1)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa}^s + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^s = l_{ik} \wedge n_{sa} + j_{sa}^{ik} - j_{sa}^s = n_{is} + j_{sa} - s \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \vee$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = 1 \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_i-k-s+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\cdot)} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}}{1}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_i + j_{sa} - s = l_s \wedge$

$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_s^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)$

$$f_Z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)$$

$$f_Z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_i + j_{sa} - s = l_s \wedge$

$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$\frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{DSD} S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \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_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\)} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1, \dots, \mathbb{k} \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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$$fz S_{j_s}^{n-s} = \sum_{l_i=1}^{D+l_s-n-l_i} \binom{()}{(j_s=j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{()}{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

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$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{lk})}^{()} \frac{(n_{sa} + j_{sa} - j_{sa}^{lk})!}{(n_{sa} + j_{sa} - n - j_{sa}^s) (n + j_{sa} - j_{sa}^{lk})!} \cdot \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_s)!}{(D + j_{sa} + s - n - l_i - j_{sa}) (n + j_{sa} - j_{sa} - s)!}$$

- $((D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $(D \geq n < n \wedge l_s \geq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$
- $(D + s - n < (D + l_s + s - n - 1)) \wedge$
- $((D \geq n < n \wedge l_s = k = 0 \wedge$
- $j_{sa}^s \leq j_{sa} - 1 \wedge$
- $s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^s\} \wedge$
- $s \geq 3 \wedge s = s) \vee$
- $(D \geq n < n \wedge l_s = k > 0 \wedge$
- $j_{sa}^s \leq j_{sa} - 1 \wedge$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}^k=l_i+n+j_{sa}-D-1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \dots$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s > D - n + 1) \wedge \\ & 2 \leq j_s \leq j_{sa} - j_{sa} - 1 \wedge \\ & j_s - j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee \\ & ((D \geq n < n \wedge l_s \leq D - n + 1) \wedge \\ & 1 \leq j_s \leq j_{sa} - j_{sa} - 1 \wedge \\ & j_s - j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \\ & (D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge \\ & ((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge \\ & j_{sa}^s \leq j_{sa} - 1 \wedge \\ & s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge \end{aligned}$$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-k+1)}^{()} \sum_{j_{sa}=l_{sa}}^{l_{ik}+j_{sa}-j_{sa}^{ik}+1} \sum_{n_i=n_i}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()} \frac{(n_{sa} + \dots - s - j_{sa})!}{(n_{sa} + j_{sa} - s - j_{sa})! \cdot (n + j_{sa} - s - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$((D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{sa} - j_{sa} + 1$

$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s > D - n + 1 \wedge$

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$(D \geq n < n \wedge l_s > D - n + 1 \wedge$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n+k}^n \sum_{(n_i=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_i+j_{sa}^{s}-j_{sa}^{ik}}^{(n_{sa}+j_{sa}^{s}-j_{sa}^{ik})} \sum_{(n_{sa}+j_{sa}^{s}-j_{sa}^{ik})}^{(n_{sa}+j_{sa}^{s}-j_{sa}^{ik})} \frac{(n_{sa}+j_{sa}^{s}-j_{sa}^{ik})!}{(n_{sa}+j_{sa}^{s}-n-j_{sa}^{s})! \cdot (n_{sa}+j_{sa}^{s}-s-j_{sa}^{s})!} \frac{(n_{sa}+j_{sa}^{s}-j_{sa}^{ik})!}{(l_s+j_{sa}^{s}-k+1) \cdot (l_s-2)!} \frac{(D-l_i)!}{(D+j_{sa}^{s}+s-n-l_i-j_{sa}^{s})! \cdot (n_{sa}+j_{sa}^{s}-j_{sa}^{s}-s)!}$$

- $((D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
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- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
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- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \wedge$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{()}{(j_s=j_{sa}-j_{sa}+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l_i)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$((D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s = l_s \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$(D + s - n < l_i \leq (D + l_s + s - n - 1)) \wedge$

$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s + \mathbb{k} \vee$

$(D > n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{l_{ik}-k-j_{sa}^{ik}+2}{(j_s=l_i+n-D-s+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_{sa}^{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik}}{(n_{sa}+j_{sa}-s-n_{ik})} \cdot \frac{(n_{sa}+j_{sa}-s-n_{ik})!}{(n_{sa}+j_{sa}-n-j_{sa}^s)(n+j_{sa}-j_{sa}^{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-s-k)!}{(D-s)!} \cdot \frac{(n+j_{sa}-j_{sa}^{sa}-s)!}{(n+j_{sa}-j_{sa}^{sa})!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$(D + s - n < D - s + s - n - 1)) \wedge$$

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$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

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$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-} \sum_{n_i=n}^n \sum_{(n_{sa}=n+l_s-j_{sa}-\mathbb{k})}^{(n_{sa}+j_{sa}-s-j_{sa})} \frac{(n_{sa}+j_{sa}-s-j_{sa})!}{(n_{sa}+j_{sa}-s-j_{sa})! \cdot (n+j_{sa}-s-j_{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s+j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-j_s-i)!}{(D+j_{sa}-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$$

$$s \geq s_0 \wedge (s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_s^i, j_{sa}\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_s^i\} \wedge$$

$$j_{sa}^s \leq j_{sa} - \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{i_s}+j_{sa}^{i_k}-j_{sa}^{i_k}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{i_k}-j_{sa}^{i_k})}^{()}$$

$$\frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j_{sa} + s - n - l_s - j_{sa})! \cdot (n_{i_s} + j_{sa} - j_{sa}^s - 1)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{i_k} + 1 = l_s \wedge l_{sa} + j_{sa}^{i_k} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{i_k} + 1 = l_s \wedge l_{sa} + j_{sa}^{i_k} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D > n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{i_k} + 1 > l_s \wedge l_{sa} + j_{sa}^{i_k} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{i_k} + 1 = l_s \wedge l_{sa} + j_{sa}^{i_k} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1) \vee$$

$$(\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} j^{sa} = \sum_{j_s=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \vee$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}^i\}$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$j_{sa}^s \leq j_{sa} - 1) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{()}$$

$$\frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j_{sa} + s - n - l_s - j_{sa})! \cdot (n_{sa} + j_{sa} - j_{sa}^s - 1)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq (n + l_s + 1 - (n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \frac{(n_{sa}+j_{sa}-j_{sa}^s)!}{(n_{sa}+j^{sa}-n_{is}-j_{sa}^s)! \cdot (n_{is}-s-j^{sa})!} \cdot \frac{(l_s-k+1)!}{(l_s-k+1)!(j_s-2)!} \cdot \frac{(D+l_s-j_s-n-l_i)!}{(D+j_s-s-n-l_i)! \cdot (n+j_{sa}-j^{sa}-s)!}$$

- $((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$
- $(l_{ik} > D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$
- $(D > n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$
- $(l_{ik} > D + l_{ik} + j_{sa} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$
- $(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{sa} - j_{sa} + 1 > l_s \wedge$

$$l_{sa} > D + l_s + j_{sa} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_i > D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = 0$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} - j_{sa} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n-\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{is}-j_{sa}^{is}}^{()} \sum_{(n_{ik}+j_{sa}^{ik}-j_{sa}^{is})}^{()} \frac{(2 \cdot n_{is} + j_s - n_{sa} - j_s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j_s - 2 \cdot \mathbb{k})! \cdot (j_s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(n + j_{sa} + j_s - n - l_i - j_s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_s - 1 \leq j^{sa} - n + j_{sa} - s \wedge$

$l_s - j_{sa}^{ik} + 1 \leq l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$((D > n < n \wedge l_s = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^s, j^i\}$

$s \geq 3 \wedge s \leq s) \vee$

$(D \geq n < n \wedge l_s = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{(n_{sa}-j_{sa}-\mathbb{k})}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2)!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^{s})! \cdot (n + j_{sa} - j_s)!} \cdot \frac{(l_{sa} - k - 1)!}{(j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - 1)!}{(D + j^{sa} + s - n - l_{sa} - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_s \leq j_{sa} - 1 \wedge$$

$$s: \{j_s, \dots, j_{sa}, \dots, j_s\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n, l_s = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \neq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_s, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^s)}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_s^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - n - l_s - j_{sa})! \cdot (n_{is} + j_{sa} - j^{sa} - s - 1)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^s = l_{ik} \wedge n_{ik} + j_{sa} - s = n_{is} \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0) \vee$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s\} \wedge$

$s > 3 \wedge s = s + \mathbb{k} \vee$

$(D > n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_s\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_s+n+j_{sa}-D-1}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk} \binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}}{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot lk)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l_s + k - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$((D \geq n < n \wedge l = lk = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = lk > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, lk, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + lk \wedge$$

$$lk_z: z = 1)$$

$$f_Z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)} \binom{()}{j_s=j^{sa}-j_{sa}+1} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1} \sum_{n_i=n+lk}^n \sum_{(n_i=n+lk-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk} \binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$j_s, j^{sa} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$S_i^{DS} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=l_{sa}+n-D}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} \sum_{k=1}^{D-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_{z \cup j_{sa}}^{SD} = \sum_{k=1}^{D-n} \binom{()}{j_{sa} - j_{sa} + 1} \sum_{j_{sa} = l_{sa} + n - D}^{l_s + j_{sa} - k}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \binom{()}{n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}}$$

$$\frac{(n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} \cdot 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_{sa}^s}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{\substack{l_s = l_i + j_{sa} - s + 1 \\ j_{sa} - j_{sa} + \dots = l_{ik} + n + j_{sa} - D - j_{sa}^{ik}}} \sum_{n_i = n + \mathbb{k}}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{is} = n + \mathbb{k} - j_s + 1)}} \sum_{\substack{(\) \\ n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik} \\ (n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}} \frac{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j_{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j_{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-i_{sa}+1)}^{(j_s=j_{sa}+1)} \sum_{j_{sa}=\mathbb{n}+j_{sa}-D-j_{sa}^{ik}}^{l_{sa}} \sum_{i_{sa}=j_s+1}^{j_s+1} \sum_{n_{is}=\mathbb{n}+\mathbb{k}-j_s+1}^{n_{is}+\mathbb{k}} \sum_{j_{sa}^{ik}=\mathbb{n}_{sa}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(j_{sa}^{ik}=\mathbb{n}_{sa}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(2 \cdot n_{is} + j_s \cdot n_{sa} - j_{sa}^s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s \cdot n_{sa} - j_{sa}^s - s - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (\mathbb{n} + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - \mathbb{n} - l_i - j_{sa})! \cdot (\mathbb{n} + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge l_s > D - j_{sa}^s + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s \wedge$$

$$j_s - j_{sa}^s \leq j_{sa}^s \leq \mathbb{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{l_s+k} \sum_{(n_{ik}=n+j_{sa}-j_{sa}^s-2 \cdot \mathbb{k})}^{n_{ik}+j_{sa}^s-j_{sa}^i} \sum_{(n_{ik}=n+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_i)} \frac{(2 \cdot n_{is} + j_{sa} - n_{sa} - j_{sa} - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_{sa} - n_{sa} - j_{sa} - 2 \cdot \mathbb{k})! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - n_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge I = \mathbb{k} > D - 1 \wedge$$

$$2 \leq j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$j_{sa}^s + j_{sa} - 1 \leq j_{sa}^s \leq n \wedge j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{ik} \wedge l_{ik} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_s+n+j_{sa}-D}^{l_i+j_{sa}-k-s+1} \sum_{n_i=0}^n \sum_{(n_{sa}=n+j_s+1)}^{(j_s+1)} \sum_{n_{ik}=0}^{j_{sa}^{ik}} \sum_{(n_{sa}=n+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()} \frac{(2 \cdot n_{i_s} + j_s - n_{sa} - j_{sa} - 2 \cdot \mathbb{k})!}{(2 \cdot n_{i_s} + 2 \cdot j_s - n_{sa} - j_{sa} - n - \mathbb{k} - j_{sa} + (n + j_{sa}^s - s - j_s)!)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - i)!}{(D + j_{sa}^s - n - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1$$

$$2 \leq j_s \leq j_{sa} - 1 \wedge$$

$$j_{sa} - 1 \leq n_{sa} \leq n_{sa} - s \wedge$$

$$l_{ik} + j_{sa}^{ik} + 1 = l_s + j_{sa} + j_{sa}^{ik} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_s+n+j_{sa}-D-1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}^{ik}=n_{sa}^{s}-j_{sa}^{ik}-k)}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n_{is} + j_{sa}^s - s - j_s - \mathbb{k})!} \cdot \frac{(n_{sa}^{ik} - k)!}{(l_s + n_{is} - k + 1 - j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_s + s - n - l_i - j_{sa}^s)! \cdot (n_{is} + j_{sa}^s - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - 1 \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s + j_{sa}^s + j_{sa}^{ik} - j_{sa}^{ik} \wedge n_{is} + j_{sa}^s - s = l_{sa} \wedge$

$(n_{is} \geq n < n_{is} \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s + \mathbb{k} \wedge$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_s+n+j_{sa}-D-1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{()} \frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k} - j_{sa}^{ik})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^{ik})! \cdot (n + j_{sa} - j_s)!} \cdot \frac{(l_s - k - 1)!}{(j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \mathbb{k})!}{(D + j^{sa} + s - n - \mathbb{k} - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge l_s = 0 \wedge$

$j_s \leq j_{sa} - 1 \wedge$

$s: \{j_s, \dots, j_{sa}, \dots, j_{sa}^{ik}\} \wedge$

$j_s \geq 3 \wedge (s = s) \vee$

$(D \geq n < n \wedge l_s = \mathbb{k} + 1 \wedge$

$j_{sa}^{ik} \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_s^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$fzS_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\quad)}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_s^s - s - j_s)^!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - n - l_s - j_{sa})! \cdot (n_{is} + j_{sa} - j^{sa} - s - 1)^!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge n_{ik} + j_{sa} - s = n_{is} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \vee$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = 1 \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{(\cdot)} (2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l_s)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_i + j_s - s = l_s \wedge$

$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_s^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk} \binom{()}{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot lk)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \dots)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - \dots - s)!}}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot lk - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_i + j_s - s = l_s \wedge$$

$$((D \geq n < n \wedge l = lk = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = lk > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, lk, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + lk \wedge$$

$$lk_z: z = 1)$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk} \binom{()}{(n_{is}=n+lk-j_s+1)}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

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$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$j_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \binom{l_{ik}-k-j_{sa}^{ik}+2}{(j_s=l_i+n-D-s+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \binom{n_i-j_s+1}{(n_i=n+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{()}{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

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$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$\sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} \sum_{k=1}^{D-n} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k-s+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} \sum_{i=1}^{D-n+1} \binom{l_s - k - j_{sa}^{ik}}{j_s = l_{sa} + i - D - j_{sa} + 1} j_{sa} = j_s + j_{sa} - 1 \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_{sa}^s - j_{sa}^{ik}} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{(\)} \frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_{z}^{cDSD} j_{sa} = \sum_{k=1}^{D-n+1} \sum_{l_s=l_{sa}+n-j_{sa}+1}^{l_s} \sum_{j_{sa}=j_s+j_{sa}-1}^{j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} - j_{sa}^s - j_{sa}^{ik} - n_{sa} - j_{sa}^s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} - 2 \cdot j_s - n_{sa} - j_{sa}^s - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{l_i=k+2}^{(l_i-k+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{n-D-j_{sa}^{lk}} \sum_{i_s+1}^{i_s+1} \sum_{n_{is}+\mathbb{k}}^{(n_{is}+\mathbb{k}-j_s+1)} \sum_{n_{is}+i_s}^{(n_{is}+i_s)} \sum_{j_{sa}^{ik}}^{(j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(2 \cdot n_{is} + j_s \cdot n_{sa} - j_{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s \cdot n_{sa} - j_{sa} - s - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge l_s > D - j_{sa} + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - 1 \wedge$$

$$j_s - j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{n_i=n+\mathbb{k}}^{(n_i)} \sum_{n_{ik}=j_{sa}^s-j_{sa}-n_{ik}}^{(n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(2 \cdot n_{is} + j_{sa} - n_{sa} - j_{sa} - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_{sa} - j_{sa} - 2 \cdot \mathbb{k})! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - n_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$2 \leq j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$j_{sa}^s + j_{sa} - 1 \leq j_{sa}^s \leq n \wedge j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{ik} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-n}^{(j_s+1)} \sum_{n_i=n}^{(n+j_s+1)} \sum_{n_{ik}=n}^{(n+j_s+1)} \sum_{(n_{sa}=n+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n+j_s+1)} \frac{(2 \cdot n_{is} + j_s - n_{sa} - j_{sa} - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j_{sa} - n - \mathbb{k} - j_{sa}^s) \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - i)!}{(D + j_{sa}^s - n - i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - 1 \wedge$$

$$j_s \leq j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s - j_{sa} - j_{sa}^{ik} + j_{sa}^{ik} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j^{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_i=n+k-j_s+1)}^{(n_i-j_s+1)} \frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n_{is} + j_{sa}^s - s - j_s - \mathbb{k})!} \frac{(n_{is} - k)!}{(l_s + i_s - k + 1) \cdot (s - 2)!} \frac{(D - l_i)!}{(D + j_s + s - n - l_i - \mathbb{k})! \cdot (n_{is} + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - 1 \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge n_{is} + j_{sa} - s = l_{sa} \wedge$

$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s + \mathbb{k} \wedge$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_s-j_{sa}-\mathbb{k})}^{(\cdot)}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2)!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^{s})! \cdot (n + j_{sa} - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \mathbb{k})!}{(D + j^{sa} + s - n - l_s - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge l_s - \mathbb{k} = 0 \wedge$

$j_s \leq j_{sa} - 1 \wedge$

$s: \{j_s, \dots, j_{sa}, \dots, j_s\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l_s - \mathbb{k} > 0 \wedge$

$j_{sa}^{s} \neq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_s^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (\mathbf{n} + j_s^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - \mathbf{n} - l_s - j_{sa})! \cdot (n_{sa} - j^{sa} - 1)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D + s - \mathbf{n} < l_i \leq l_s + l_{sa} + j_{sa} - j^{sa})) \wedge$$

$$((D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{(n_{sa}^{s}+j_{sa}^{ik}-j_{sa}^{s}-k)} \frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - k)!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot k - j_{sa}^s)! \cdot (n_{is} + j_{sa}^s - s - j_s - k)!} \frac{(k!)!}{(l_s + j_s - k + 1) \cdot (s - 2)!} \frac{(D - l_i)!}{(D + j_s + s - n - l_i - j_{sa})! \cdot (n_{is} + j_{sa} - j^{sa} - s)!}$$

- $((D \geq n < n \wedge l_s > D - n + 1$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$
- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
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- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$
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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq s + \mathbb{k} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \binom{(\quad)}{(j_s=j_{sa}-j_{sa}+1)} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk)}^{()}}{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot lk)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l_s)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$S_{j_s}^{DSD} = \sum_{k=1}^{l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1, \dots, \mathbb{k} \Rightarrow$$

$$f_z^{DSD} S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z^{DSD} = \sum_{k=1}^{D+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{l=1}^{D+l_s+s-n-l_i} \sum_{(l_i+n-D) \leq i \leq (l_s-k+1) \leq i \leq (n+l_s-1)} \sum_{(n_i-j_s+1) \leq j_{sa} \leq (n_i+\mathbb{k}-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}) \leq (n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \sum_{(n_{is}+j_s-j_{sa}-j_{sa}^s-s-2 \cdot \mathbb{k})!} \frac{(n_{is}+j_s-j_{sa}-j_{sa}^s-s-2 \cdot \mathbb{k})!}{(2 \cdot n_{is}+2 \cdot j_s-n_{is}-j_{sa}-j_{sa}^s-s-2 \cdot \mathbb{k}-j_{sa}^s)! \cdot (n+j_{sa}^s-s-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}^s+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D + j_{sa} - n - l_{sa}} \sum_{(j_s = j_{sa} - k - j_{sa}^{ik} + 1)}^{j_{sa} - k - j_{sa}^{ik} + 1} \sum_{j_{sa} = l_i + n + j_{sa} - D - s} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{()} \frac{(n_{is} + j_s - n_{sa} - j_{sa}^s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is})! \cdot (2 \cdot j_s - n_{sa} - j_{sa}^s - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_s}^k = \sum_{i=1}^{D+l_s+s-n-l_{sa}} \binom{()}{(j_s=j_{sa}-j_{sa}+1)} \sum_{j_{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{()}{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_i} \binom{j_{sa}-n-l_{sa}}{k} \binom{l_s-j_{sa}-k}{j_{sa}-j_{sa}^{sa}} \binom{l_s-j_{sa}-k}{j_{sa}=l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_{sa} - n_{sa} - j_{sa}^a - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j_{sa}^a - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}+n-D}^{l_s+j_{sa}-k} \frac{(n_{i_s}+1) \dots (n_{i_s}+\mathbb{k}+1) (n_{i_s}+n+\mathbb{k}-1)}{(2 \cdot n_{i_s} + j_s - n_{sa} - j_{sa} - s - \mathbb{k})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$((D > n < n \wedge l_s \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1) \wedge$$

$$j_s - j_{sa} - 1 \leq j_{sa} - j_{sa} + j_{sa} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

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$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{l_i+n-D-s}^{(l_{ik}-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(j_s+1)} \sum_{n_{is}+\mathbb{k}}^{(n_{is}+n+\mathbb{k}-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(2 \cdot n_{is} + j_s \cdot n_{sa} - j_{sa}^s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s \cdot n_{sa} - j_{sa}^s - s - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

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$$l_s - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

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$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

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$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

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$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{i=1}^{l_s + j_{sa} - n - l_s} \sum_{(j_s = l_s, \dots, -D - j_{sa} + 1)}^{(l_{ik} - k - \mathbb{k} + 2)} \sum_{j_{sa} = j_s + j_{sa} - 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}}^{(\cdot)} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{(\cdot)} \frac{(2 \cdot \dots + j_s - n_{sa} - j_{sa}^s - s - 2 \cdot \mathbb{k})!}{(2 \cdot \dots + 2 \cdot j_s - n_{sa} - j_{sa}^s - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

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$$(D \geq n < n \wedge l_s = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-k+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_{sa}-1}^{j_{sa}-1} \sum_{n_i=n+l_s-k}^n \sum_{j_s=n+l_s-k-j_s+1}^{(n_i)} \sum_{n_{ik}+j_{sa}-j_{sa}^{ik}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(2 \cdot n_{is} + j_{sa} - n_{sa} - j_{sa} - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j_{sa} - 2 \cdot \mathbb{k} - j_s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})} \frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2)!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot k - j_{sa}^{s})! \cdot (n + j_{sa} - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_s)!}{(D + j^{sa} + s - n - l_s - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

- $((D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $(D \geq n < n \wedge l_s \geq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$
- $(D + s - n < D + s - n - 1) \wedge$
- $((D \geq n < n \wedge l_s = k = 0 \wedge$
- $j_{sa}^s \leq j_{sa} - 1 \wedge$
- $s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^s\} \wedge$
- $s \geq 3 \wedge s = s) \vee$
- $(D \geq n < n \wedge l_s = k > 0 \wedge$
- $j_{sa}^s \leq j_{sa} - 1 \wedge$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$(\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_s}^{l_s+j_{sa}-k} \frac{(2 \cdot n_{is} + j_s - n_{sa} - j_{sa} - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j_{sa} - n - \mathbb{k} - j_{sa})! (n + j_{sa} - s - j_s)!} \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \frac{(D - i)!}{(D + j_{sa} - n - i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1) \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} - 1 \wedge$$

$$j_s - j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1) \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} - 1 \wedge$$

$$j_s - j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-j_{sa}^{ik}+1) j_{sa}^s=j_{sa}-1}^{(l_s-k+1)} \sum_{n_i=n+1}^n \sum_{j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}}^{(j_{sa}^{ik})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_{sa} - n_{sa} - j_{sa} - 2 \cdot \mathbb{k})!}{(j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D > n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$(l_{sa} > D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} > D + l_s + j_{sa}^{ik} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} > D + l_s + j_{sa} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_i > D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, \mathbb{k}, j_{sa}^i, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1 \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = 0$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{i=0}^{(j_{sa}^s - j_{sa} + 1)} \sum_{l_i=0}^{l_i + j_{sa} - 1} \sum_{l_s=0}^{l_s + n + j_{sa} - D - s} \sum_{j_s=0}^{j_s + 1} \sum_{j_{sa} = n + \mathbb{k} - j_s + 1}^{j_{sa} + \mathbb{k}} \sum_{i_{ik}=0}^{(n_{is} + j_{sa}^s - j_{sa}^{ik})} \sum_{j_{sa}^{ik}=0}^{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}$$

$$\frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{sa} - 2 \cdot j_{sa}^s - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa}^s - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D > n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{\mathbb{k}}^{D-n+1} \binom{()}{(j_s=j_{sa}-j_{sa})} \binom{()}{j_{sa}=l_{sa}+n-D} \sum_{j_s+1}^{j_s} \sum_{n_{is}+k}^{n_{is}+k} (n_{is}=n+k-j_s+1) \sum_{j_{sa}^{ik}=n_{ik}+j_{sa}^{ik}}^{j_{sa}^{ik}} (n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k) \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{sa} - 2 \cdot j_{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \frac{1}{(n + j_{sa}^s - j_s - s)!} \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}+1)}^{(l_s)} \sum_{j_{sa}=n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-1} \sum_{n_{is}=n_{is}+1}^{n_{is}+1} \sum_{n_{ik}=\mathbb{k}}^{n_{ik}+1} \sum_{n_{sa}=n_{sa}-j_{sa}+1}^{n_{sa}-j_{sa}+1} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{sa} - n_{sa} - 2 \cdot j_{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D - n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: (z = 1)) \Rightarrow$$

$$f_z^{\mathcal{S}^{DSD}}_{j_s, j_{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_{sa}^s - j_{sa} + 1) \leq j_{sa}^s - k} \sum_{(l_s = j_{sa} - k + 1) \leq j_{sa}^s - k} \sum_{(n_{is} = n + \mathbb{k} - j_s - 1) \leq j_{sa}^s - k} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}) \leq j_{sa}^s - k} \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{sa} - 2 \cdot j_{sa}^s - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa}^s - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \frac{1}{(n + j_{sa}^s - j_s - s)!} \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{l_i=0}^{(j_{sa}^s - j_{sa} + 1)} \sum_{l_s=0}^{l_i + n + j_{sa} - D - s} \sum_{j_s=0}^{j_s + 1} \sum_{j_{sa} = n + \mathbb{k} - j_s + 1}^{j_{sa} + \mathbb{k}} \sum_{j_{sa}^{ik} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}}^{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})} \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{sa} - 2 \cdot j_{sa}^s - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa}^s - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D > n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{i=0}^{\binom{l_s}{k}} \sum_{j=0}^{l_{ik}+j_{sa}-k+1} \sum_{l=0}^{n+j_{sa}-D-s} \sum_{m=0}^{\binom{l_s}{j}} \sum_{n_{is}=0}^{n_{is}+i} \sum_{n_{ik}=0}^{n_{ik}+k} \sum_{n_{sa}=0}^{n_{sa}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{is} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_s - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{l_s=0}^{(j_{sa}^s - j_{sa} + 1)} \sum_{l_i=0}^{l_s} \sum_{j_s=0}^{l_i + n + j_{sa} - D - s} \sum_{j_{sa}^i=0}^{j_s + 1} \sum_{j_{sa}^k=0}^{j_{sa} + \mathbb{k}} \sum_{n_{is}=n + \mathbb{k} - j_s + 1}^{(j_{sa}^i - j_{sa} + 1)} \sum_{n_{sa}=n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}}^{(j_{sa}^i - j_{sa} + 1)}$$

$$\frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{sa} - 2 \cdot j_{sa}^s - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa}^s - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D > n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

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$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

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$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=0}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa})}^{(j_s=j_{sa}-j_{sa})} \sum_{(j_{sa}=l_{sa}+n-D)}^{(j_{sa}=l_{sa}+n-D)} \sum_{(j_s=j_s+1)}^{(j_s=j_s+1)} \sum_{(j_{sa}=n+\mathbb{k})}^{(j_{sa}=n+\mathbb{k})} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_{is}=n+\mathbb{k}-j_s+1)} \sum_{(n_{ik}=n_{is}+j_s)}^{(n_{ik}=n_{is}+j_s)} \sum_{(n_{sa}=n_{ik}+j_{sa}^i-j_{sa}-\mathbb{k})}^{(n_{sa}=n_{ik}+j_{sa}^i-j_{sa}-\mathbb{k})} \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{sa} - 2 \cdot j_{sa}^i - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa}^i - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

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$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{l_s=k}^{(l_{sa}-k) \wedge (j_{sa}+2)} \sum_{n_{sa}=j_s+j_{sa}-1}^{(n_{sa}+n-D-j_{sa}^{ik}) \wedge (j_{sa}^i)} \sum_{n_{is}=n_{sa}+j_s}^{(n_{is}+1) \wedge (n_{is}+n+j_{sa}-j_s+1)} \sum_{n_{ik}=n_{sa}+j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{sa} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

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$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{i_s=0}^{(l_s-k-1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{n-D-j_{sa}^{ik}} \sum_{i_s+1}^{i_s+1} \sum_{n_{is}+k}^{n_{is}+k} (n_{is}=n+k-j_s+1) \sum_{i_s+1}^{i_s+1} \sum_{j_{sa}^{ik}}^{j_{sa}^{ik}} (n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k) \frac{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{is} - n_{sa} - 2 \cdot j_{sa}^i - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{is} - n_{sa} - 2 \cdot j_{sa}^i - \mathbf{n} - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!}$$

$$D > \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^i - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^i \leq \mathbf{n} + j_{sa} - s \wedge$$

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$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{j_s=1}^{D-n+1} \sum_{j_{sa}=j_s+j_{sa}-1}^{\binom{k-s+2}{j_s+l_s+n}} \sum_{j_s+1}^{j_s+1} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{n_{is}+1} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{n_{sa}} \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{l_s=1}^{D-n+1} \sum_{j_s=l_s+n}^{(l_s - j_{sa} + 2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{j_s+1} \sum_{j_{sa}+k}^{(n_{is}=n+k-j_s+1)} \sum_{j_{sa}^{ik}=n_{is}+j_{sa}^{ik}}^{j_{sa}^{ik}} \sum_{j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)}$$

$$\frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{l_{ik}=j_s+1}^{D-n+1} \sum_{j_s=l_s+n-1}^{l_{ik}-j_{sa}^{ik}+2} \sum_{j_{sa}=j_s+j_{sa}-1}^{j_{sa}^{ik}+2} \sum_{i_s=1}^{i_s+1} \sum_{n_{is}=\mathbb{k}}^{n_{is}+\mathbb{k}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(n_{is}+\mathbb{k})(n_{is}+\mathbb{k}-j_s+1)} \frac{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{is} - n_{sa} - 2 \cdot j_{sa}^s - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa}^s - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

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$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$\sum_{k=1}^{D+l_s-n-l_i} \binom{l_{sa}-k+1}{j_{sa}^{ik}-j_{sa}+1} j_{sa}^{ik} = l_i + n + j_{sa} - D - s$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{(\quad)}{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(3 \cdot n_i + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa}^s - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_i + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa}^s - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

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$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

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$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j_s^s}^{DSD} = \sum_{k=1}^{l_s + s - n - l_i} \binom{l_s + s - n - l_i}{k} \sum_{n_i = n + \mathbb{k}}^n \sum_{n_{is} = n + \mathbb{k} - j_s + 1}^{(n_i - j_s + 1)} \binom{n_i - j_s + 1}{n_{is} = n + \mathbb{k} - j_s + 1} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \binom{n_{is} + j_{sa}^s - j_{sa}^{ik}}{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \sum_{n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}} \binom{n_{is} + j_{sa}^s - j_{sa}^{ik}}{n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}} \cdot \frac{(s \cdot n_{is} + 2 \cdot j_s + j_{sa}^{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa}^{ik} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-j_{sa}+1, \dots, l_i=n+l_s-j_{sa}-D-s)}^{()} \frac{l_s^{a-k}}{\sum_{n_i=n+l_s-j_{sa}+1}^n \sum_{n_s=n+l_s-j_s+1}^{(n_s)} \sum_{n_{ik}+j_{sa}-j_{sa}^{ik}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(n_{ik})}}$$

$$\frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{sa} - 2 \cdot j_{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - 2 \cdot j_{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(n + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D + s - \mathbf{n} < l_i \leq D + l_{sa} + s - \mathbf{n} - j_{sa})) \wedge$$

$$((D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-l_i} \sum_{(j_s+n-D-s+1)}^{(l_{sa}-j_{sa}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}}^{(\cdot)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa} - \mathbf{n} - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{l_i+n-D-s}^{(l_{ik}-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(j_s+1)} \sum_{n_{is}+\mathbb{k}}^{(n_{is}+n+\mathbb{k}-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{()}$$

$$\frac{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{sa} - n_{sa} - 2 \cdot j_{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - a - 2 \cdot j_{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-n}^{(j_s-k+1)} \sum_{n_i=0}^n \sum_{n_{ik}=0}^{(n_{sa}=n+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa} - s - j_{sa} - \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - j_{sa} - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa}^s + 1 \wedge$$

$$j_s + j_{sa}^s - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D - n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa}^s + 1 \wedge$$

$$j_s - j_{sa}^s - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{D+l_s+j_{sa}-n-l_{sa}}{j_s=j_s+k} \sum_{l_s=j_{sa}+1}^{j_{sa}-k-j_{sa}^{ik}+1} \binom{j_{sa}-k-j_{sa}^{ik}+1}{l_s=l_s+k} \sum_{n_i=n+\mathbb{k}}^{n} \binom{n}{n_i=n+\mathbb{k}} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \binom{(n_i-j_s+1)}{n_{is}=n+\mathbb{k}-j_s+1} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \binom{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \cdot \frac{(3 \cdot n_{is} + 2 \cdot j_{sa}^s + j_{sa} - n_{ik} + n_{sa} - 2 \cdot j_{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} + n_{sa} - 2 \cdot j_{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n) \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

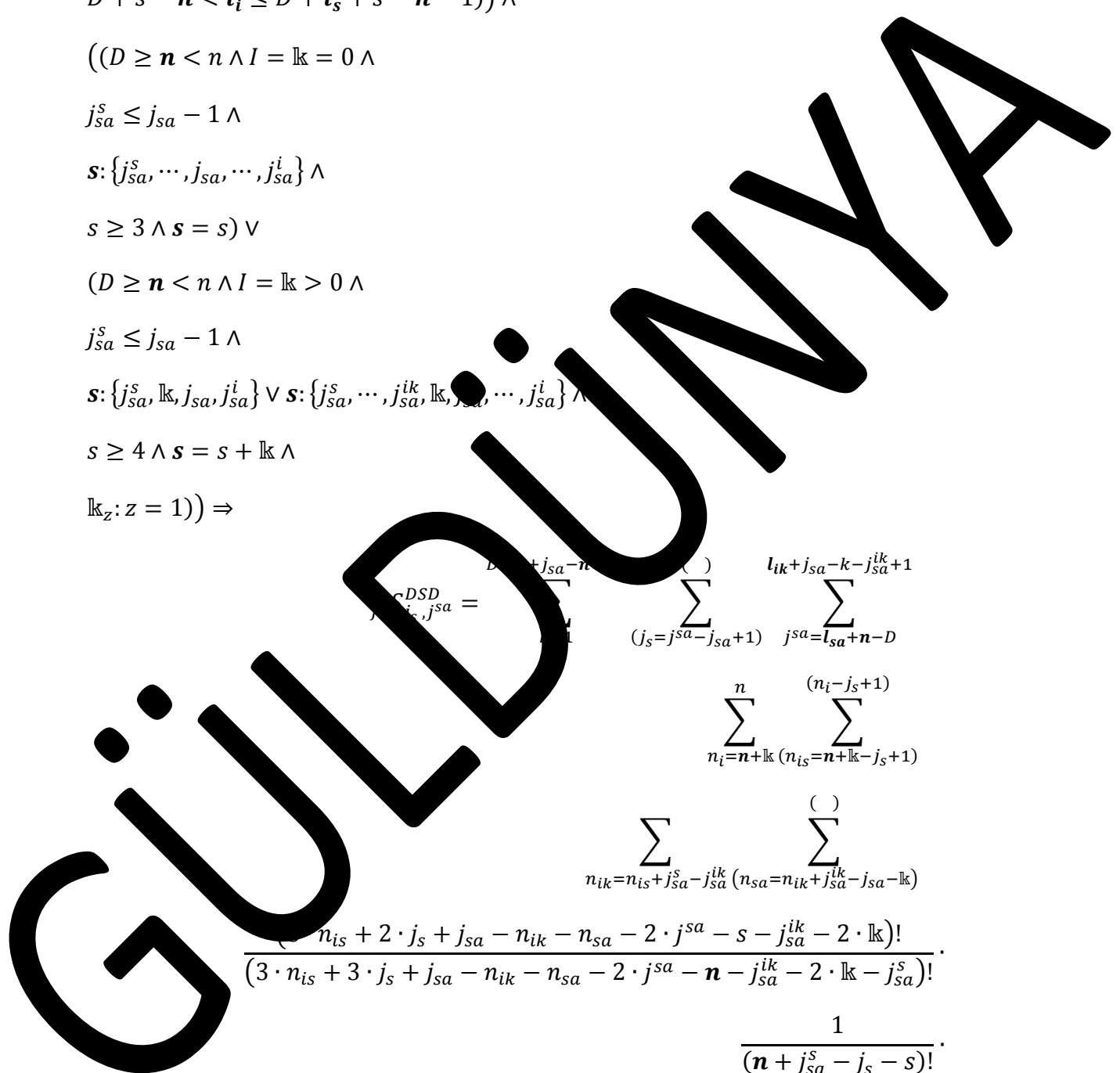
$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$\begin{aligned}
 & \sum_{(j_s = j^{sa} - j_{sa} + 1)}^{()} \sum_{j_{sa} = l_{sa} + n - D}^{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}}^{()} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{()} \\
 & \frac{(n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$



$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_s) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n \wedge l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$D + s - n \wedge l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{l_s + j_{sa} - n} \sum_{(j_s=j_{sa}+1)}^{(j_s=j_{sa}+1)} \sum_{j_{sa}^s = l_i + n + j_{sa} - D - s}^{l_s + j_{sa} - k} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa} - j_{sa}^{ik}}^{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})} \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa}^s - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa}^s - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{D+l_s+j_{sa}-n-l_{sa}}{k} \sum_{(j_s=j_{sa}-j_{sa}^s)} \sum_{j_{sa}=l_{sa}+n-D}^{j_{sa}} \sum_{j_s+1}^{j_s} \sum_{j_{sa}+\mathbb{k}}^{j_{sa}} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)} \binom{D+l_s+j_{sa}-n-l_{sa}}{k} \sum_{n_{ik}=n_{is}+j_s}^{n_{ik}} \sum_{j_{sa}^{ik}}^{j_{sa}^{ik}} (n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})!$$

$$\frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{sa} - 2 \cdot j_{sa}^s - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa}^s - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s + j_{sa}^s - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$\sum_{k=1}^{D+l_s-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-j_{sa}^{ik}+2)} \sum_{j_s=j_s+j_{sa}-1}^{(n-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()} \frac{(3 \cdot j_s + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1 \wedge$$

$$\mathbb{k}: z = 1))$$

$$fz S_{j_s, j_{sa}}^{D, j_s, j_{sa}} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}}^{(\)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \mathbf{l}_i)!}{(D + j^{sa} + s - \mathbf{n} - \mathbf{l}_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa})!}$$

$$((D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

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$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s > D - \mathbf{n} + 1 \wedge$$

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$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} > \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

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$$D + s - \mathbf{n} < \mathbf{l}_i \leq D + \mathbf{l}_s + s - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge \mathbf{l}_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 > \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$D + s - \mathbf{n} < \mathbf{l}_i \leq D + \mathbf{l}_s + s - \mathbf{n} - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz S_{j_s^{sa}} = \sum_{k=1}^{D+l_s+sa-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=0}^{l_s + j_{sa} - n - l_{sa} - l_s - k + 1} \sum_{(j_s = l_{sa} + D - j_{sa} + 1)}^{j_{sa} = j_s + j_{sa} - 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{(\quad)} \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz^{SD} = \sum_{k=1}^{D+l_s-j_{sa}-n-l_{sa}} \binom{()}{(j_s=j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{()}{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s \wedge \mathbb{k} \wedge$$

$$\mathbb{k} \geq 2 \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} j_{sa}^{sa=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk)}$$

$$\frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot lk)!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot lk - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! (l_s - 2)!}$$

$$\frac{(D - n)!}{(D + j^{sa} + s - n - l_i - j_{sa})! (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \vee$$

$$l_{sa} > D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge l_i > D + l_{sa} + s - n - j_{sa} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} > D + l_s + j_{sa}^{ik} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$-j_{sa} - 1 > l_s \wedge$$

$$l_{sa} > D + l_s + j_{sa} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_i > D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{S_{j_s, j_{sa}^{DSD}}} = 0$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + \dots - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_s \leq j_{sa} - 1 \wedge$$

$$s: \{j_s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{S_{j_s, j_{sa}^{DSD}}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\quad)} \frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{(n - s - \mathbb{k} - 1)!}{(n - s - \mathbb{k} - 1)!} \cdot \frac{(l_s - j_s - n - 1)! \cdot (j_s - 2)!}{(l_s - l_i)!} \cdot \frac{1}{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

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$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$

$s \geq j_{sa} \vee (s = s) \vee$

$(D \geq n < n \wedge l_s = \mathbb{k} > 1 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}, \mathbb{k}, j_s^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$l_{sa} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\)}$$

$$\frac{(2 \cdot n_{ik} + j_{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j_{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n - s - \mathbb{k} - 1)!}$$

$$\frac{1}{(l_s - j_s - n - 1)! \cdot (j_s - 2)!}$$

$$\frac{1}{(l_i - l_j)!}$$

$$\frac{1}{(D - j_{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa} - a - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$$

$$s \geq j_{sa} \vee (s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_s^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_s^i\} \wedge$$

$$j_{sa}^s = s + \mathbb{k} \wedge$$

$$(\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\)} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\)} \frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{(n - s - \mathbb{k} - 1)!}{(n - s - \mathbb{k} - 1)!} \cdot \frac{(l_s - j_s - n - 1)! \cdot (j_s - 2)!}{(l_s - l_i)!} \cdot \frac{1}{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^{sa} - s)!}$$

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$s \geq j_{sa} \vee (s = s) \vee$

$(D \geq n < n \wedge l_s = \mathbb{k} > 1 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}, \mathbb{k}, j_s^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}, \mathbb{k}, j_{sa}, \dots, j_s^i\} \wedge$

$l_{sa} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\)} \sum_{j^{sa}=l_s+n+j_{sa}-D-1}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{()}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(n - s - \mathbb{k} - 1)!}{(n - s - \mathbb{k} - 1)!}$$

$$\frac{(l_s - j_s - n - 1)! \cdot (j_s - 2)!}{(l_s - l_i)!}$$

$$\frac{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^{sa} - s)!}{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^{sa} - s)!}$$

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$$s \geq j_{sa} \vee (s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_s^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$j_{sa}^s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^s)}^{(\quad)} \frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n - s - \mathbb{k} - 1)! \cdot (n - j_s - n_{sa} - 1)! \cdot (j_s - 2)! \cdot (n - l_i)!} \cdot (D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^s - a - s)!$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$

$s \geq j_{sa}^s (s = s) \vee$

$(D \geq n < n \wedge l_s = \mathbb{k} > 1 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_s^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$l_{sa} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{()}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n - s - \mathbb{k} - 1)!}$$

$$\frac{1}{(l_s - j_s - n - 1)! \cdot (j_s - 2)!}$$

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$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$$

$$s \geq j_{sa} \vee (s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_s^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$j_{sa}^s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\)} \frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{(n - s - \mathbb{k} - 1)!}{(n - s - \mathbb{k} - 1)!} \cdot \frac{(l_i - j_s - n - 1)! \cdot (j_s - 2)!}{(l_i - l_i)!} \cdot \frac{(n + j_{sa}^{sa} - s)!}{(n + j_{sa}^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$

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$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$

$s \geq j_{sa} \vee (s = s) \vee$

$(D \geq n < n \wedge l_s = \mathbb{k} > 1 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}, \mathbb{k}, j_s^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}, \mathbb{k}, j_{sa}, \dots, j_s^i\} \wedge$

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$$f_z^{S^{DSD}}_{j_s, j^{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\)} \sum_{j^{sa}=l_{sa}+n-D}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{()}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(n - s - \mathbb{k} - 1)!}{(n - s - \mathbb{k} - 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i - j_s - n - 1)! \cdot (j_s - 2)!}{(l_i - j_s - n - 1)! \cdot (n + j_{sa}^s - a - s)!}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\)}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(n - s - \mathbb{k} - 1)!}{(n - s - \mathbb{k} - 1)! \cdot (j_s - 2)!}$$

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$s: \{j_{sa}, \mathbb{k}, j_s^i, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\)}$$

$$\frac{(2 \cdot n_{ik} + j_{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j_{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(n - s - \mathbb{k} - 1)!}{(n - s - \mathbb{k} - 1)!}$$

$$\frac{(l_i - j_s - n - 1)! \cdot (j_s - 2)!}{(l_i - l_i)!}$$

$$\frac{(D - j_{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa} - a - s)!}{(D - j_{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa} - a - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

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$$l_{sa} = s + \mathbb{k} \wedge$$

$$l_{k_z}: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\)} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n - s - \mathbb{k} - 1)!}$$

$$\frac{1}{(l_s - j_s - n - 1)! \cdot (j_s - 2)!}$$

$$\frac{1}{(l_i - l_j)!}$$

$$\frac{1}{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^{sa} - a - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

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$$\frac{(2 \cdot n_{ik} + j_{sa}^s + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j_{sa}^s + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(n - s - \mathbb{k} - 1)!}{(n - s - \mathbb{k} - 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_s - j_s - n - 1)! \cdot (j_s - 2)!}{(l_s - l_i)!}$$

$$\frac{(D - j_{sa}^s + s - l_i - j_s - 1) \cdot (n + j_{sa}^s - a - s)!}{(D - j_{sa}^s + s - l_i - j_s - 1) \cdot (n + j_{sa}^s - a - s)!}$$

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$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)}$$

$$\frac{1}{(n - s - \mathbb{k} - 1)!}$$

$$\frac{1}{(n - j_s - n_{sa} - 1)! \cdot (j_s - 2)!}$$

$$\frac{1}{(n - l_i)}$$

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$s \geq j_s \vee (s = s) \vee$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{()}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)}$$

$$\frac{1}{(n - s - \mathbb{k} - 1)!}$$

$$\frac{1}{(l_s - j_s - n - 1)! \cdot (j_s - 2)!}$$

$$\frac{1}{(l_s - l_i)}$$

$$\frac{1}{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^{sa} - s)!}$$

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$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(n - s - 1)!}{(n - s - 1)!}$$

$$\frac{(n - k - 1)!}{(n - j_s - n - 1)! \cdot (j_s - 2)!}$$

$$\frac{(n - l_i)!}{(D - j_{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa} - a - s)!}$$

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$s \geq j_{sa} \vee (s = s) \vee$

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$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n - s - \mathbb{k} - 1)!}$$

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$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, l_i\} \wedge$$

$$s \geq j_{sa} \vee (s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$j_{sa}^s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_i+n-D-s+1)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{s})}^{(\cdot)}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{(n - s - \mathbb{k})!}{(n - s - \mathbb{k} - 1)!} \cdot \frac{(l_s - j_s - n - 1)! \cdot (j_s - 2)!}{(l_s - l_i)!} \cdot \frac{1}{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^{a-s})!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$

$s \geq j_{sa} \vee (s = s) \vee$

$(D \geq n < n \wedge l_s = \mathbb{k} > 1 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}, \mathbb{k}, j_s^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$j_{sa}^s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\)}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n - s - \mathbb{k} - 1)! \cdot (n - j_s - n_{ik} - 1)! \cdot (j_s - 2)! \cdot (n - l_i)!}$$

$$\frac{1}{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^{sa} - a - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)}$$

$$\frac{(\dots)}{(n - s - \dots)!}$$

$$\frac{(\dots - k - 1)!}{(l_s - j_s - n - 1)! \cdot (j_s - 2) \dots}$$

$$\frac{(\dots - l_i)}{(D - j^{sa} + s - \dots - l_i - j_s - 1) \cdot (n + j_{sa}^s - a - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

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$s: \{j_{sa}^s, \mathbb{k}, j_s^i, j_{sa}\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_s^i\} \wedge$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\frac{1}{(n - s - \mathbb{k} - 1)!}$$

$$\frac{1}{(l_s - j_s - n - 1)! \cdot (j_s - 2)!}$$

$$\frac{1}{(l_i - l_j)!}$$

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$$s: \{j_{sa}^s, \mathbb{k}, j_s^i, j_{sa}\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_s^i\} \wedge$$

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$$\frac{1}{(n - s - \mathbb{k} - 1)!}$$

$$\frac{1}{(l_i - j_s - n - 1)! \cdot (j_s - 2)!}$$

$$\frac{1}{(n - l_i)!}$$

$$\frac{1}{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^{sa} - s)!}$$

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$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^s)}^{()}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(n - s - \mathbb{k} - 1)!}{(n - s - \mathbb{k} - 1)!}$$

$$\frac{(l_s - j_s - n - 1)! \cdot (j_s - 2)!}{(l_s - l_i)!}$$

$$\frac{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^s - a - s)!}{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^s - a - s)!}$$

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$$\frac{1}{(n - s - \mathbb{k} - 1)!}$$

$$\frac{1}{(l_s - j_s - n - 1)! \cdot (j_s - 2)!}$$

$$\frac{1}{(l_i - l_j)}$$

$$\frac{1}{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^{sa} - s)!}$$

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$$\frac{(l_i - j_s - n + 1)! \cdot (j_s - 2)!}{(l_i - l_i)! \cdot (n + j_{sa}^s - a - s)!}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^s)}$$

$$\frac{(2 \cdot n_{ik} + j_{sa}^s + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j_{sa}^s + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n - s - \mathbb{k} - 1)! \cdot (n - j_s - n_{ik} - 1)! \cdot (j_s - 2)! \cdot (n - l_i)!}$$

$$\frac{1}{(D - j_{sa}^s + s - \mathbb{k} - l_i - j_s - 1) \cdot (n + j_{sa}^s - a - s)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

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$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$

$s \geq j_{sa} \vee (s = s) \vee$

$(D \geq n < n \wedge l_s = \mathbb{k} > 1 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_s^i, j_{sa}\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_s^i\} \wedge$

$l_{sa} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^s)}^{(\quad)}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n - s - \mathbb{k} - 1)! \cdot (l_s - j_s - n - 1)! \cdot (j_s - 2)! \cdot (l_i - l_j)!}$$

$$\frac{1}{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^s - a - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j^i\} \wedge$$

$$s \geq j_{sa} \vee (s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j^i\} \wedge$$

$$j_{sa}^s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^s)}^{(\quad)} \frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!} \dots$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$

$s \geq j_s \vee (s = s) \vee$

$(D \geq n < n \wedge l_s = \mathbb{k} > 1 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_s^i, j_{sa}\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_s^i\} \wedge$

$l_s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\quad)}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(\quad)!}{(n - s - \mathbb{k} - 1)!}$$

$$\frac{(\quad - k - 1)!}{(l_s - j_s - n - 1)! \cdot (j_s - 2)!}$$

$$\frac{(\quad - l_i)!}{(D - j^{sa} + s - \mathbb{k} - l_i - j_s - 1) \cdot (n + j_{sa}^s - a - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$$

$$s \geq j_s \vee (s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_s^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$j_{sa}^s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z^{SDSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\quad)} \frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n - s - \mathbb{k} - 1)! \cdot (n - j_s - n - 1)! \cdot (j_s - 2)! \cdot (n - l_i)!} \cdot (D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^{sa} - s)!$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$

$s \geq j_s \vee (s = s) \vee$

$(D \geq n < n \wedge l_s = \mathbb{k} > 1 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_s^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$l_{sa} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{()}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(n - s - 1)!}{(n - s - 1)!}$$

$$\frac{(n - k - 1)!}{(n - j_s - n - 1)! \cdot (j_s - 2)!}$$

$$\frac{(n - l_i)!}{(D + s - n - l_i - j_{sa} - 1) \cdot (n + j_{sa} - a - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s < D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D + s - n - l_i \leq D + l_i + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s \geq 3 \wedge \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D}^{l_{sa}-k+1} \sum_{n_i=1}^n \sum_{(j_s=j_s+1)}^{(j_s+1)} \sum_{n_{ik}=1}^{j_{sa}^{ik}} \sum_{(n_{sa}=n+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()} \frac{(2 \cdot n_{ik} + j_{sa}^a + 2 \cdot j_{sa}^{ik} - n_{sa} - j_{sa} - j_s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j_{sa}^a + 2 \cdot j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_{sa}^a - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s + j_{sa}^s - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s + j_{sa}^s - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq j_{sa}^s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^s, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz \mathcal{S}_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{()} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - s - k)!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot k - j_{sa}^{ik})!} \cdot \frac{1}{(n+j_s-j_s-s)!} \cdot \frac{(l_s-k)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+j_{sa}-n-l_i-j_s)! \cdot (n+j_{sa}-j^{sa}-s)!}$$

- $((D \geq n < n \wedge l_s > D - n + 1) \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$
- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s < D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s < D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = 1) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - \mathbf{n} - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s - 2 \cdot \mathbb{k})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! (l_s - 2)!}$$

$$\frac{(D - \mathbb{k})!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! (n_{sa} + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} + j_{sa} - s > l_{sa} \wedge$$

$$(D + s - \mathbf{n} < l_i \wedge (D + l_{sa} - s - \mathbf{n} - j_{sa})) \wedge$$

$$((D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}} \sum_{(n_{sa}^{ik}=n_{is}+j_{sa}^{ik}-k)}^{(n_{sa}^{ik}=n_{is}+j_{sa}^{ik}-k)} \frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_s - j_s - s - 2 \cdot k)!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_s - 2 \cdot k - j_{sa}^{ik})!} \cdot \frac{(n + j_{sa} - j_s - s)!}{(n - k - 1)!} \cdot \frac{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}{(D - k)!} \cdot \frac{(D - k)!}{(D + j_s - s - n + l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$((D \geq n < n \wedge l_s > D - n + 1) \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$

$(D \geq n < n \wedge l_s > D - n + 1 \wedge$

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$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$$

$$s \geq s_0 \wedge (s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_s^i, j_{sa}\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_s^i\} \wedge$$

$$j_{sa}^s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{is}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{()}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot l_k) \cdot (n_{sa} - j_s - n_{ik} - 1)! \cdot (j_s - 2)!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - l_k - j_{sa}^s) \cdot (n_{sa} - j_s - n_{ik} - 1)! \cdot (j_s - 2)! \cdot (n - l_i)}$$

$$\frac{(D - j^{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa}^a - s)!}{(n - l_i)}$$

$((D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$

$(D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

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$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D + j_{sa} - n < l_s \leq D + j_{sa} - n + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + j_{sa} - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1))$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge (l_i - j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge (l_i - j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - (j_s - 1)) \wedge$$

$$((D \geq n < n \wedge l_s = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1) \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^s\}$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_s = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1) \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-k)}^{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-k)} \frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - s - k)!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot k - j_{sa}^s)!} \frac{1}{(n + j_{sa} - j_s - s)!} \frac{(l_s - k)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \frac{(D - l_i)!}{(D + j^{sa} + j_{sa} - n - l_i - j_s - s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

- $((D \geq n < n \wedge l_s > D - n + 1) \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} < n + j_{sa} - s \wedge$
- $(l_s - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $(D > n < n \wedge l_s > D - n + 1) \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} + j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$
- $(D + s - n - l_i \leq D + l_s + s - n - 1)) \wedge$
- $((D > n < n \wedge I = k = 0 \wedge$

- $j_{sa}^s \leq j_{sa} - 1 \wedge$
- $s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$
- $s \geq 3 \wedge s = s) \vee$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{()}{(j_s=j_{sa}-j_{sa})} \sum_{i_{sa}=l_{sa}-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+l_{sa}-j_s+1}^{n} \sum_{n_{ik}=n+l_{sa}-j_{sa}-j_s+1}^{n} \sum_{n_{ik}+j_{sa}^s-j_{sa}^{ik}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(2 \cdot n_{ik} + j_{sa}^{ik} - n_{sa} - j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(n + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s - j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$(j_{sa}^i = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n-\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}}^{()} \sum_{(n_{ik}+j_{sa}-j_{sa})}^{()} \frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} - 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot \mathbb{k} - j_s - s)!} \cdot \frac{1}{(j_s + j_{sa} - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{1}{(n - l_i)!} \cdot \frac{1}{(D + j^{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

- $((D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_s + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_s + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
- $2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 3 \wedge s = s + \mathbb{K} \vee$$

$$(D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-k)}^{()} \frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - s - k)!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot j_{sa}^{s} - j_{sa}^{s})!} \cdot \frac{1}{(n + j_{sa} - j_s - s)!} \cdot \frac{(l_s - k)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + n - l_i - j_s - s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n - 1) \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n - 1) \wedge$$

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$$(D + s - n - l_i \leq D + l_s + s - n - 1)) \wedge$$

$$(n < n \wedge I = k = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-k)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_{sa}-1}^{(n)} \sum_{n_i=n+k}^{(n_i)} \sum_{n_i=n+k-j_s+1}^{(n_i)} \sum_{n_{ik}=n_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_{ik}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(n_{ik})}$$

$$\frac{(2 \cdot n_{ik} + j_{sa}^{ik} - n_{sa} - j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(n + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$((D \geq n < n \wedge l_s > D - n + 1 \wedge$

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$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{i=1}^{l_s + j_{sa} - n - l_s} \sum_{(j_s = l_{sa} - D - j_{sa} + 1)}^{(l_{ik} - k - \mathbb{k} + 2)} \sum_{j_{sa} = j_s + j_{sa} - 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}}^{()} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{()} \frac{(n_{ik} + j_{sa}^s + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j_{sa}^s + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{i=l_i+n-D-s}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(j_s+1)} \sum_{j_{sa}+k}^{(n_{is}=n+k-j_s+1)} \sum_{j_{sa}^{ik}=n_{is}+j_{sa}^{ik}}^{(j_{sa}^{ik})} \sum_{j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{ik} + j_{sa} + j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j_{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} j_{sa}^{s+k} \sum_{(n_i=j_{sa}-1)}^{(n_i=j_{sa}+1)} \dots$$

$$\frac{(2 \cdot n_{ik} + j_{sa}^s + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j_{sa}^s - 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

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$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

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$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+n-l_{sa}} \sum_{\substack{0 \leq j_{sa} - j_{sa} + \dots \\ a = l_{ik} + n + j_{sa} - D - j_{sa}^{ik}}} \sum_{\substack{0 \leq l_s - k \\ a = l_{ik} + n + j_{sa} - D - j_{sa}^{ik}}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \sum_{(n_{sa} = n_{ik} + j_{sa}^{lk} - j_{sa} - \mathbb{k})}^{(\quad)} \frac{(2 \cdot n_{ik} + j_{sa}^s - 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j_{sa}^s + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

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$$fz S_{j_s, j_{sa}}^{D, j_s, j_{sa}} = \sum_{i=0}^{D+l_s+j_s-n-l_{sa}} \sum_{k=0}^{(l_s-k+1)} \sum_{j_s=l_{ik}+n-D-j_{sa}^{ik}+1}^{j_s=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{()}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} > D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} > D + l_s + j_{sa}^{ik} - n - 1 \wedge l_i > D + l_{sa} + s - n - j_{sa}) \vee$$

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$$s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = 0$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

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$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^b, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

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$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

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$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s = j_{sa} - j_{sa} + 1)}^{()} \sum_{j_{sa} = l_{sa} + n - D}^{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}}^{()} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{()}$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$\mathbf{l}_{ik} - j_{sa}^{ik} + 1 = \mathbf{l}_s \wedge \mathbf{l}_{sa} + j_{sa}^{ik} - j_{sa} = \mathbf{l}_{ik} \wedge \mathbf{l}_i + j_{sa} - s = \mathbf{l}_{sa} \wedge$$

$$((D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=\mathbf{l}_s+\mathbf{n}-D)}^{(\mathbf{l}_i-k-s+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - \mathbf{n} - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z^{DSD} S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z^{DSD} S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \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_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\)}$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + (n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}^i\}$$

$$s \geq 3 \wedge s = s) \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$j_{sa}^s \leq j_{sa} - 1) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik})}^{(\cdot)}$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{(n_{is} - s - j_{sa} - j_s)!}{(n_{is} - s - j_{sa} - j_s - k - 1)!} \cdot \frac{(n_{is} - j_s - n - 1)! \cdot (j_s - 2)!}{(n_{is} - l_i)!} \cdot \frac{(n_{is} - l_i)!}{(D - n_{is} + s - l_i - j_s - 1) \cdot (n + j_{sa} - a - s)!}$$

$((D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^k, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k} = \dots) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}^{()}$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot lk)!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot lk - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_{sa}^s)}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! (l_s - 2)!}$$

$$\frac{(D - n + 1)!}{(D + j_{sa} + s - n - l_i - j_{sa})! (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s < D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - j_{sa} < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1 \wedge$$

$$\mathbb{k}: z = 1))$$

$$f_{z^s}^{D, j_s, j^{sa}} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + (n - j_{sa})) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}^i\}$$

$$s \geq 3 \wedge s = s) \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$j_{sa}^s \leq j_{sa} - 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} (n_{is}=n+\mathbb{k}-j_s+1)$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik})}^{(\)}$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - \mathbb{k} - j_{sa}^s) \cdot (n_{is} - s - j_s)! \cdot (n_{ik} - k - 1)! \cdot (n_{sa} - j_s - n_{sa} - 1)! \cdot (j_s - 2)! \cdot (n - l_i) \cdot (D - n_{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa} - a - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^k, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k} = \dots) \Rightarrow$$

$$f_{zS}^{DSD}_{j_s, j_{sa}} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}^{()}$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot lk)!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot lk - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_{sa}^s)}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! (l_s - 2)!}$$

$$\frac{(D - n + 1)!}{(D + j_{sa} + s - n - l_i - j_{sa})! (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{sa} + j_{sa} - n - j_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa} - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1 \wedge$$

$$\mathbb{k}: z = 1))$$

$$j_{z=1}^{DSD} j_s j^{sa} = \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} j^{sa=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}}^{()} (n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + n - 1 \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}^i\}$$

$$s \geq 3 \wedge s = s) \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$j_{sa}^s \leq j_{sa} - 1) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{()}{(j_s=j_{sa}-j_{sa}+1)} \sum_{j_{sa}=l_i+n+j_{sa}-D-s}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\frac{\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_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\)} \frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{(n_{is} - s - j_{sa} - j_s)!}{(n_{is} - s - j_{sa} - k - 1)!} \cdot \frac{(n_{sa} - j_s - n - 1)! \cdot (j_s - 2)!}{(n_{sa} - l_i)!}}{(D - n_{sa} + s - l_i - j_s - 1) \cdot (n + j_{sa} - a - s)!}$$

$((D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_s + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$(D + s - n - l_i \leq D + j_{sa} + s - n - 1)) \wedge$

$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$\{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{(\cdot)}{(j_s=j^{sa}-j_{sa}+1)} \sum_{j^{sa}=l_{sa}+n-D}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n}^n \binom{(\cdot)}{(n=j_s+1)} \binom{(\cdot)}{(n=j_s+1)} \sum_{n_{ik}=n}^n \binom{(\cdot)}{(n_{sa}=n+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{is} + n_{ik} - j_{sa}^{ik} - n_{sa} - s - j_{sa})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{sa} - n_{sa} - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_{sa}^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_{zS}^{DSD}_{j_s, j^{sa}} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{l_s+j_{sa}-k} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-k)}^{()} \frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_s - 2)! \cdot 2 \cdot j_s!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - j_{sa} - 2 - j_s - j_s^{is})!} \cdot \frac{1}{(n + j_{sa} - s - j_s)!} \cdot \frac{(l_s - k)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + n - l_i - j_s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\}$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$(D \geq n < n) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=l_{sa}+n-D}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - \mathbf{n} - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n - s - j_s)! \cdot (n - k - 1)! \cdot (l_s - j_s - n - 1)! \cdot (j_s - 2)! \cdot (l_i - l_j)!}$$

$$\frac{1}{(D + j_{sa}^s + s - l_i - j_s - 1) \cdot (n + j_{sa}^s - a - s)!}$$

$$((D \geq \mathbf{n} < n \wedge l_s > D - \mathbf{n} + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D + s - \mathbf{n} - l_i \leq D + j_{sa} + s - \mathbf{n} - 1)) \wedge$$

$$((D \geq \mathbf{n} < n \wedge l_i - \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s \geq 3 \wedge \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_i = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-} \sum_{n_i=n}^n \sum_{n_{sa}=n+l_i-j_s-1}^{(n+j_s+1)} \sum_{n_{ik}=n+l_i-j_s-1}^{(n+j_s+1)} \sum_{n_{sa}=n+l_i-j_s-1}^{(n+j_s+1)} \frac{(n_{is} + n_{ik} - n_{sa} - s - j_{sa})!}{(n_{is} + n_{ik} + j_s + j_{sa} - n_{sa} - l_i - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa}^s + 1 \wedge$$

$$j_s + j_{sa}^s - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^s + 1 = l_s \wedge l_{sa} + j_{sa}^s - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa}^s + 1 \wedge$$

$$j_s + j_{sa}^s - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^s + 1 = l_s \wedge l_{sa} + j_{sa}^s - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s, n-D-j_{sa}^{ik}, \dots, j_{sa}-1)}^{(l_{ik}-k-j_{sa}^{ik}+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}, n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{is}+n_{ik}+j_{sa}^{ik}-n_{sa}-s-j_{sa}-2 \cdot \mathbb{k})!} \frac{1}{(n+j_{sa}^s-s-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$(D \geq n < n \wedge l_s = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_i+n-D-k+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_{sa}-1}^{j_{sa}-1} \sum_{n_i=n+l_s-j_s+1}^n \sum_{n_{ik}=n+l_s-j_s+1}^{n+l_s-j_s+1} \frac{(n_{is} + n_{ik} + j_{sa}^i - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_{sa}^i - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(n + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$(j_{sa}^i = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n-\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}}^{(n_{is}+n_{ik}+j_{sa}^{ik}-s-j_{sa}-2 \cdot \mathbb{k})!} \frac{(n_{is}+n_{ik}+j_{sa}^{ik}-s-j_{sa}-2 \cdot \mathbb{k})!}{(n_{is}+n_{ik}+j_s+j_{sa}-n-\mathbb{k}-j_s-j_{sa}^{ik}-2 \cdot \mathbb{k}-j_{sa}^s)!} \frac{1}{(n_{is}+n_{ik}+j_{sa}^s-s-j_s)!} \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \frac{1}{(n-l_i)!} \frac{1}{(D+j_{sa}+n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{sa}+1)}^{(j_s=j_{sa}+1)} \sum_{j_{sa}^i=n+j_{sa}-D-j_{sa}^{ik}}^{(j_s=j_{sa}+1)} \sum_{n_{is}=n+\mathbb{k}}^{(j_s=j_{sa}+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(j_s=j_{sa}+1)} \frac{(n_{is} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_{n, s, j_{sa}} = \sum_{j_s=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{j_{sa}^{ik}=1}^{(l_s-k+1)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(j_s+l_{ik}+n-D-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$\sum_{k=1}^{i^{l-1}} \sum_{j_s=j^{sa}-j_{sa}+1}^{()} \sum_{j_{sa}=j_{sa}+1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{()} \frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=i}^{()} \sum_{j_s=1} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i - s - \mathbb{k})!}{(n_i - n - \mathbb{k})! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} \wedge l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} \wedge l_{sa} > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 1 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z^{S^{DSD}}_{j_s, j_{sa}} = \sum_{k=1}^{i-1} \sum_{\binom{()}{j_s=j_{sa}-j_{sa}+1}} \sum_{j_{sa}=j_{sa}+1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik})}^{(\)}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!}$$

$$\frac{(l_s - k - 1)! \cdot (n - 2)!}{(l_s - j_s - 1)! \cdot (n - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n - j_{sa} - s)!} +$$

$$\sum_{k=l}^j \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik})}^{(\)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}}$$

$$\frac{(n_i - s - l_k)!}{(n_i - n - l_k)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1) \vee$$

$$(\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - l_i - j_{sa})!}$$

$$\sum_{k=0}^n \sum_{(j_s=1, \dots, j_{sa}=j_{sa})} \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1) \dots} \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

- $((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik})$
- $((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$
- $l_{sa} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$
- $((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$
- $l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + 1) \vee$$

$$(\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - \dots)}$$

$$\sum_{k=0}^n \sum_{(j_s=1, \dots, j_{sa}=j_{sa})}^{()} \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1, \dots, n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{\dots}{(n - \mathbb{k})! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - 1$

$l_{ik} - j_{sa}^{ik} + 1 = l_s + j_{sa} + j_{sa}^{ik} - j_{sa} - \mathbb{k} \wedge \dots + j_{sa} - s = l_{sa} \wedge$

$(D \geq n < n \wedge l = \mathbb{k} = \dots)$

$j_{sa}^s \leq j_{sa} - 1$

$\{j_{sa}^s, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s$

$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-l_k)}^{(n_i-j_s+1)}$$

$$\frac{(D-s-l)!}{(D-n-l)! \cdot (n-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (j_{sa}-j^{sa}-s)!} +$$

$$\sum_{k=l}^{(n)} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k}$$

$$\frac{(n_i-s-l_k)!}{(n_i-n-l_k)! \cdot (n-s)!}$$

$$\frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}$$

$$((D \geq n < n+1 \wedge l_s \leq D-n+1 \wedge$$

$$1 \leq j_s \leq j^{sa}-j_{sa}+1 \wedge$$

$$j_s+j_{sa}-1 \leq j^{sa} \leq n+j_{sa}-s \wedge$$

$$l_{ik}-j_{sa}+1 = l_s \wedge l_{sa}+j_{sa}^{ik}-j_{sa} = l_{ik} \wedge l_i+j_{sa}-s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D-n+1 \wedge$$

$$1 \leq j_s \leq j^{sa}-j_{sa}+1 \wedge$$

$$j_s+j_{sa}-1 \leq j^{sa} \leq n+j_{sa}-s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz_{i,sa}^{SD} = \sum_{k=1}^{i^l - l_{sa} - k - j_{sa}} \sum_{(j_s=2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i - s - I)!}{(n_i - n - I)! \cdot (n - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}} (n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1) \frac{(n_i - s - \mathbb{k})!}{(n_i - n - \mathbb{k})! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{i=1}^{i-1} \binom{l_i - j_{sa}^{ik} + 2}{j_s = 2} \sum_{j_{sa} = j_s + j_{sa} - 1} \sum_{j_{sa} = j_s + 1} \sum_{n_{is} = n + \mathbb{k} - j_s + 1} \sum_{n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}} \binom{()}{n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}} \frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\sum_{k=1} \binom{()}{l} \sum_{j_s=1} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{n_{ik} = n_i + j_{sa} - j_{sa} - j_{sa}^{ik} + 1} \binom{()}{n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}}$$

$$\frac{(n_i - s - \mathbb{k})!}{(n_i - n - \mathbb{k})! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge \\ & l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge \\ & l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge \end{aligned}$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{iI - (l_s - k + 1)} \sum_{(j_s = z, \dots, j^{sa} = j_s + j_{sa} - 1)} \sum_{(j_s = z, \dots, j^{sa} = j_s + j_{sa} - 1)} \sum_{n_{is} = n + \mathbb{k} - j_s + 1}^{n_{is} = n + \mathbb{k} - j_s + 1} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})} \frac{(n_i - s - l)!}{(n_i - n - l)! \cdot (n - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{iI} \sum_{(j_s = 1)}^{(j_s = 1)} \sum_{j^{sa} = j_{sa}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n_i + j_{sa} - j^{sa} - j_{sa}^{ik} + 1)}^{(n_{ik} = n_i + j_{sa} - j^{sa} - j_{sa}^{ik} + 1)} \sum_{n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}} \frac{(n_i - s - \mathbb{k})!}{(n_i - n - \mathbb{k})! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

GÜLDÜNKYA

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^D = \sum_{k=1}^{(\)} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\)} \sum_{j_{sa}=j_{sa}+1}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{\binom{D}{l}} \sum_{j_s=1}^{\binom{D}{l}} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{D}{l}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_s} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - n - \mathbb{k})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - l_i - \mathbb{k})! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa})$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq (D - s - n)) \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fzS_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-k+1} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-lk)}^{()} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - lk - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (j_s - 2)!} \frac{(D - l_i)!}{(D + j^{sa} + s - n - j_{sa})! + (j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{l-1} \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}}^{()} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-lk)}^{()} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - lk - j_{sa}^s)!}{(n_i - n - lk)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n+1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n+1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^k, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k} = \dots) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\dots)} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk})} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l - j_{sa}^s)!}{(n_i - n - l)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^n \sum_{(j_s=1)}^n \sum_{j_{sa}=j_{sa}}^n \frac{\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk})} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_k - j_{sa}^s)!}{(n_i - n - l_k)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee \\ & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{sa} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee \\ & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \end{aligned}$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n))$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k} > 0) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \dots)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \dots$$

$$\sum_{n_i=n+\mathbb{k}} \sum_{\binom{()}{n_{ik}=n_i+j_{sa}^{lk}-j_{sa}-j_{sa}^{ik}}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - n - \mathbb{k})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} - 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge n_{sa} + j_{sa}^{lk} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$(3 \wedge \dots - s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i^{l-1} (l_i - k - s + 2)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j^{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=j_s+1)} \sum_{(n_i=j_s+\mathbb{k}-j_s+1)} \sum_{(n_i=j_s+\mathbb{k}-j_s+1)} \sum_{(n_i=j_s+\mathbb{k}-j_s+1)} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - n - l)! \cdot (n_i + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - \mathbb{k} + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i - j_{sa} - \mathbb{k} + 1)! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{i^l} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}} \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - n - \mathbb{k})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$((D \geq n < n) \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz^{SD}_{i_{sa}} = \sum_{k=1}^{sa-k-j_{sa}+2} \sum_{(j_s=2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{\binom{D}{l}} \sum_{(j_s=1)}^{\binom{D}{l}} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{\binom{D}{l}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - n - \mathbb{k})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - \mathbb{k})! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa})$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz_{j_s, j_{sa}}^{DS} = \sum_{i=1}^n \sum_{(j_s)}^{(i, \mathbb{k} - j_s - j_{sa} - 2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(i, \mathbb{k} - j_s - j_{sa} - 2)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \sum_{(j_s)}^{(n_i+j_s+j_{sa}-j_{sa}^s-s-I-j_{sa}^s)!} \frac{(n_i-n-I)! \cdot (n+j_s+j_{sa}-j_{sa}^s-s-j_{sa}^s)!}{(l_s-k-1)!} \cdot \frac{(l_s-j_s-k+1)! \cdot (j_s-2)!}{(D-l_i)!} + \frac{(n_i+j_s+j_{sa}-j_{sa}^s-s-I-j_{sa}^s)!}{(n_i-n-I)! \cdot (n+j_s+j_{sa}-j_{sa}^s-s-j_{sa}^s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!} + \sum_{k=l}^{(n)} \sum_{(j_s=1)}^{(n)} \sum_{j_{sa}=j_{sa}}^{(n)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik}-j_{sa}^{ik}+1)}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \sum_{(n_i+j_s+j_{sa}-j_{sa}^s-s-\mathbb{k}-j_{sa}^s)!} \frac{(n_i-n-\mathbb{k})! \cdot (n+j_s+j_{sa}-j_{sa}^s-s-j_{sa}^s)!}{(n_i-n-\mathbb{k})! \cdot (n+j_s+j_{sa}-j_{sa}^s-s-j_{sa}^s)!}$$

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$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa}$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz^S_{j_s, j_s^{DS}} \sum_{i=1}^{i^{l-1} (l_s - 1)} \sum_{j_s=1}^{j_s} \sum_{j_{sa}=1}^{j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - I - j_{sa}^s)!}{(n_i - n - I)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{j_s=1}^{()} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k} - j_{sa}^s)!}{(n_i - n - \mathbb{k})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

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$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$j_s \cdot j_{sa} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=j_{sa}+1}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{\binom{D}{l}} \sum_{j_s=1}^{\binom{D}{l}} \sum_{j_{sa}=j_s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{D}{l}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_s}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - \mathbb{k} - 2 \cdot j_{sa}^s)!}{(n_i - n - \mathbb{k})! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(D - l_i)!}{(D + s - l_i - \mathbb{k})! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa})$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq (D - s - n)) \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_s - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_s - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fzS_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - \mathbb{k} - 2 \cdot j_s^s)!}{(n_i - n - l)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - \mathbb{k} - 2 \cdot j_s^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (j_s - 2)!} \frac{(D - l_i)!}{(D + j^{sa} + s - n - j_{sa})! + (j_{sa} - j^{sa} - s)!} + \sum_{k=l}^{()} \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}}^{()} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{()} \sum_{(n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}+1)}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - \mathbb{k} - 2 \cdot j_s^s)!}{(n_i - n - l)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_s^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^k, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k} = \dots) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk})} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - l - 2 \cdot j_{sa}^s)!}{(n_i - n - l)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \dots)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - \dots - s)!} + \dots$$

$$\sum_{k=1}^n \sum_{(j_s=1)}^n \sum_{j^{sa}=j_{sa}}^n \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}^{lk}-j_{sa}^{-lk})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk})} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - l_k - 2 \cdot j_{sa}^s)!}{(n_i - n - l_k)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
 $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
 $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
 $l_{ik} = j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$
 $(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
 $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
 $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
 $l_{sa} = j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$
 $l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$
 $(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
 $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
 $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n))$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k} = \dots) \Rightarrow$$

$$f_{zS}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk})}^{()}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \dots)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - \dots - s)!} +$$

$$\sum_{k=1}^n \sum_{(j_s=1)}^n \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{ik}=n_i+ \dots)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk})}^{()}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - lk - 2 \cdot j_{sa}^s)!}{(n_i - n - lk)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_s \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge n_{sa} + j_{sa}^{lk} - j_{sa}^{-lk} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$(D \geq n < n \wedge I = lk = 0) \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$

$(3 \wedge \dots - s) \vee$

$(D \geq n < n \wedge I = lk > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, lk, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, lk, j_{sa}, \dots, j_{sa}^i\} \wedge$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i^{l-1} (l_i - k - s + 2)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s + j_{sa} - 1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{sa}^{is}-j_{sa}^{ik})}^{(n_{ik}+j_{sa}^{ik}-j_{sa}^{is})} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - l_i - 2 \cdot j_{sa}^s)!}{(n_i - n - l)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - \mathbb{k} + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i - j_{sa} + s - l_i - j_{sa} + (n + j_{sa} - j^{sa} - s))!} + \sum_{k=i}^{()} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^{()} \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - \mathbb{k} - 2 \cdot j_{sa}^s)!}{(n_i - n - \mathbb{k})! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n + 1) \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n + 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz_{i,sa}^{SD} = \sum_{k=1}^{sa-k-j_{sa}+2} \sum_{(j_s=2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=0}^n \sum_{l_i}^{()} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}}$$

$$\frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - k - 2 \cdot j_{sa}^s)!}{(n_i - n - k)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j^{sa} - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - l_i - 1)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa})$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz_{j_s, j_{sa}}^{DS} = \sum_{i=1}^{(l_s - j_s - 2)} \sum_{j_{sa}=j_s + j_{sa} - 1}^n \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i - j_s + 1)} \sum_{n_{ik}=n_{is} + j_{sa} - j_{sa}^{ik}}^{(n_{sa}=n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j_{sa}^s - s - I - 2 \cdot j_{sa}^s)!}{(n_i - n - I)! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j_{sa}^s - s - 2 \cdot j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} + \sum_{k=l}^{(n)} \sum_{j_s=1}^{(n)} \sum_{j_{sa}=j_s}^n \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{ik}=n_i + j_{sa} - j_{sa}^{ik} + 1}^{(n_{sa}=n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j_{sa}^s - s - \mathbb{k} - 2 \cdot j_{sa}^s)!}{(n_i - n - \mathbb{k})! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j_{sa}^s - s - 2 \cdot j_{sa}^s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge \\ & l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{sa} - j_{sa} + 1 > l_s \wedge \\ & l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge \end{aligned}$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

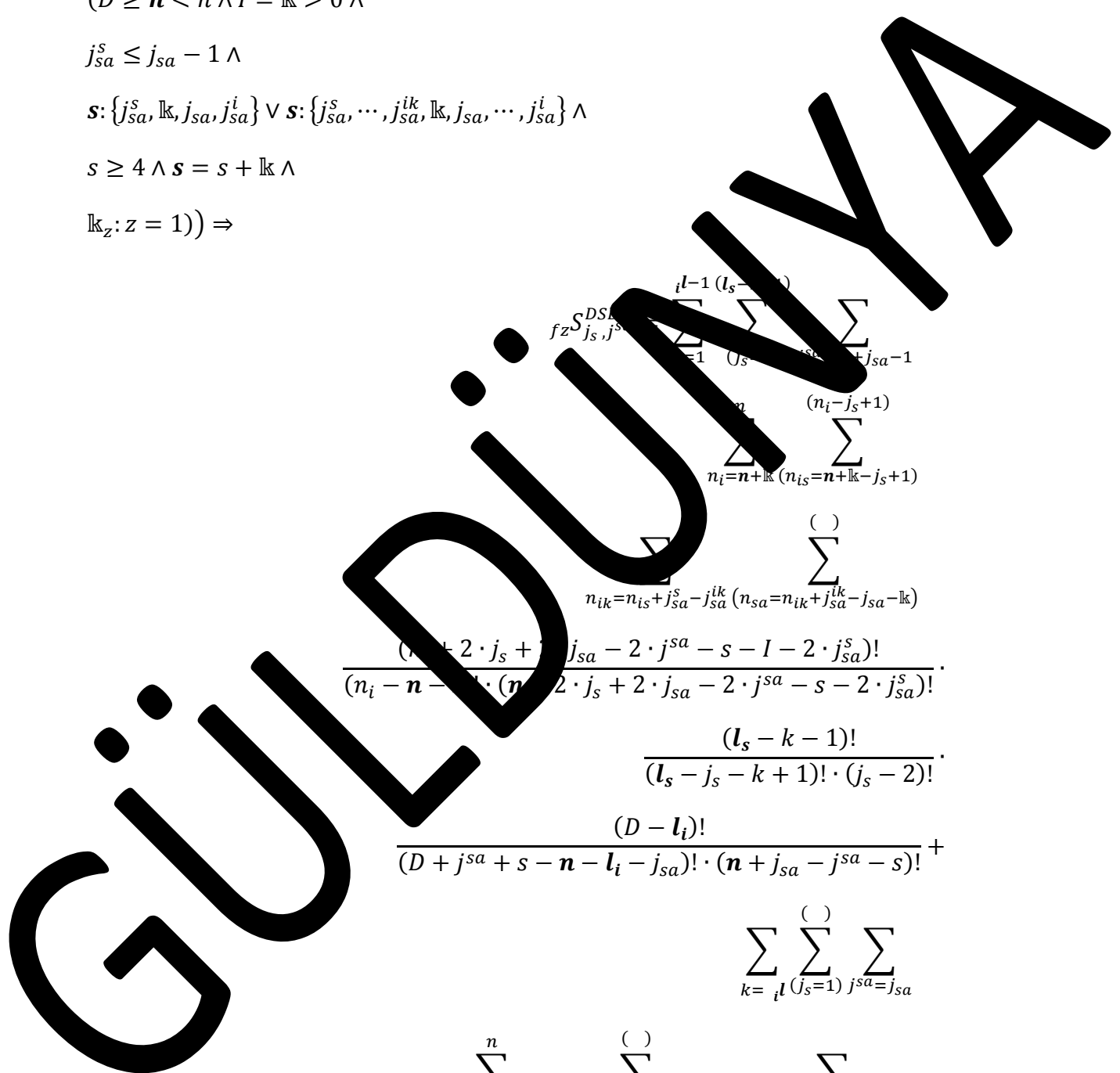
$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz \cdot S_{j_s, j_s^{DS}}^{i^{l-1} (l_s - 1)} \sum_{j_s=1}^{j_s} \sum_{j_{sa}=1}^{j_{sa}} \sum_{j_{sa}^s=1}^{j_{sa}^s} \sum_{j_{sa}^i=1}^{j_{sa}^i} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i + 2 \cdot j_s + j_{sa} - 2 \cdot j_{sa}^s - s - I - 2 \cdot j_{sa}^i)!}{(n_i - n - \mathbb{k})! \cdot (n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j_{sa}^s - s - 2 \cdot j_{sa}^i)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} + \sum_{k=l}^{()} \sum_{j_s=1}^{()} \sum_{j_{sa}^s=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{ik}=n_i+j_{sa}-j_{sa}^s-j_{sa}^{ik}+1}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{()} \frac{(n_i + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j_{sa}^s - s - \mathbb{k} - 2 \cdot j_{sa}^i)!}{(n_i - n - \mathbb{k})! \cdot (n + 2 \cdot j_s + 2 \cdot j_{sa} - 2 \cdot j_{sa}^s - s - 2 \cdot j_{sa}^i)!}$$



$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$j_{sa}^{ik} = \sum_{k=1}^{i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}^{sa}=j_{sa}+1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{j_s=1}^{()} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_s} (n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - \mathbb{k})! / ((n_i - n - \mathbb{k})! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!) \cdot \frac{(D - l_i)}{(D + s - l_i - 1) \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa})$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq (D - s - n)) \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fzS_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-k+1} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-lk)}^{()} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - lk)!}{(n_i - n - l)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (j_s - 2)!} \frac{(D - l_i)!}{(D + j^{sa} + s - n - j_{sa})! + (j_{sa} - j^{sa} - s)!} + \sum_{k=l}^{()} \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}}^{()} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-lk)}^{()} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - lk)!}{(n_i - n - lk)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n+1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n+1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^k, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k} = \dots) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} l_{ik+j_{sa}-k-j_{sa}^{ik}+1} \sum_{j_{sa}=j_{sa}+1}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk})} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - l)!}{(n_i - n - l)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l_s + k - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_s - s)!} + \sum_{k=1}^n \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}} \frac{\sum_{n_i=n+l_k} \sum_{(n_{ik}=n_i+j_{sa}^{lk}-j_{sa}^{-lk})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk})} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - lk)!}{(n_i - n - lk)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee \\ & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{sa} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee \\ & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \end{aligned}$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n))$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k} > 0) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - l)!}{(n_i - n - l)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - l_s + k - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_s - s)!} + \sum_{k=1}^n \sum_{(j_s=1)}^n \sum_{j_{sa}=j_{sa}}^n \frac{\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k})} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - \mathbb{k})!}{(n_i - n - \mathbb{k})! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_s \leq n + j_s - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge n_{sa} + j_{sa}^{lk} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$(D \geq n < n \wedge l = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$(3 \wedge (j_{sa}^s - s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i^{l-1} (l_i - k - s + 2)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}^{s-1}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{s-1})}^{()}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i - j_{sa} - s - I)! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=i}^{()} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^{()} \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - \mathbb{k})!}{(n_i - n - \mathbb{k})! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$((D \geq n < n) \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz^{D, j_{sa}} = \sum_{k=1}^{sa-k-j_{sa}+2} \sum_{(j_s=2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{\binom{D}{l}} \sum_{(j_s=1)}^{\binom{D}{l}} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{\binom{D}{l}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - \mathbb{k})!}{(n_i - n - \mathbb{k})! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - \mathbb{k})! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa})$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz_{j_s, j_{sa}}^{DS} = \sum_{i=1}^{(l_i - j_s - j_{sa} - 2)} \sum_{j_{sa}=j_s+j_{sa}-1}^n \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \sum_{(n_i-n-I)! \cdot (n+j_{sa}+j_{sa}^s-j_s-j_{sa}-s)!}^{(n_i+j_{sa}+j_{sa}^s-j_s-j_{sa}-s-I)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!} + \sum_{k=l}^{(n)} \sum_{j_s=1}^{(n)} \sum_{j_{sa}=j_{sa}}^{(n)} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}+1}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i+j_{sa}+j_{sa}^s-j_s-j_{sa}-s-\mathbb{k})!}{(n_i-n-\mathbb{k})! \cdot (n+j_{sa}+j_{sa}^s-j_s-j_{sa}-s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa}$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz^S_{j_s, j_s^{DS}} \sum_{i=1}^{i^{l-1} (l_s - 1)} \sum_{j_s=1}^{j_s} \sum_{j_{sa}=1}^{j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - I)!}{(n_i - n - I)! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{j_s=1}^{()} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i + j^{sa} + j_{sa}^s - j_s - j_{sa} - s - \mathbb{k})!}{(n_i - n - \mathbb{k})! \cdot (n + j^{sa} + j_{sa}^s - j_s - j_{sa} - s)!}$$

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$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$l_{ik} - j_{sa}^{ik} = \sum_{k=1}^{i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=j_{sa}+1}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{\binom{D}{l}} \sum_{j_s=1}^{\binom{D}{l}} \sum_{j_{sa}=j_s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1}^{\binom{D}{l}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_s} \frac{(n_i + j_s - s - \mathbb{k} - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k} - j_{sa}^s)!(n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - \mathbb{k} - j_{sa}^s)!(n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa})$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq (D + s - n)) \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0$$

$$j_{sa}^s \leq j_s - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_s - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_i+j_{sa}^s-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}^{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - j_{sa})! \cdot (j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{l_i} \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n_i+j_{sa}-j_{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i + j_s - s - \mathbb{k} - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^k, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k} = \dots) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk})} \frac{(n_{is} - s - lk)!}{(n_{is} + j_s - n - lk - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa}^s - j_s - s)!} + \sum_{k=1}^n \sum_{(j_s=1)}^n \sum_{j_{sa}=j_{sa}}^n \frac{\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk})} \frac{(n_i + j_s - s - lk - j_{sa}^s)!}{(n_i + j_s - s - lk - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
 $1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$
 $j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$
 $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$
 $(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
 $1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$
 $j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$
 $l_{sa} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$
 $l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$
 $(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
 $1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$
 $j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n))$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k} = \dots) \Rightarrow$$

$$f_{zS}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}} \frac{(n_{is} - s - lk)!}{(n_{is} + j_s - n - lk - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_s - s)!} + \sum_{k=1}^n \sum_{\binom{()}{j_s=1}} \sum_{j_{sa}=j_{sa}} \frac{\sum_{n_i=n+lk}^n \sum_{\binom{()}{n_{ik}=n_i}} \sum_{j_{sa}-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}} \frac{(n_i + j_s - s - lk - j_{sa}^s)!}{(n_i + j_s - n - lk - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_s \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge n_{sa} + j_{sa}^{lk} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$(D \geq n < n \wedge l = lk = 0) \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$

$(j_{sa}^s \leq j_{sa} - s) \vee$

$(D \geq n < n \wedge l = lk > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, lk, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, lk, j_{sa}, \dots, j_{sa}^i\} \wedge$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i^{l-1} (l_i - k - s + 2)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j^{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k})}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik})}^{(n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik})} \frac{(n_i + j_s - s - \mathbb{k})!}{(n_i + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n_i + j_s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - \mathbb{k} + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i - j_{sa}^s - \mathbb{k})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{i^l} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i + j_s - s - \mathbb{k} - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz_{i_{sa}}^{SD} = \sum_{k=1}^{sa-k-j_{sa}+2} \sum_{(j_s=2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=0}^{\infty} \sum_{l_i}^{()} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_s} \frac{(n_i + j_s - s - l_k - j_{sa}^s)!}{(n_i + j_s - n - l_k - j_{sa}^s) \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - l_i - 1) \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa})$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq (D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq (D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq (D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz_{j_s, j_{sa}}^{DS} = \sum_{i=1}^{(l_i - j_s - j_{sa} - 2)} \sum_{j_{sa}=j_s+j_{sa}-1}^n \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(n_i-j_s+1)} \frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa})! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} + \sum_{k=l}^{()} \sum_{j_s=1}^{()} \sum_{j_{sa}=j_{sa}}^{()} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{()} \frac{(n_i + j_s - s - \mathbb{k} - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge \\ & l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{sa} - j_{sa} + 1 > l_s \wedge \\ & l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge \end{aligned}$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz^S_{j_s, j_s^{DS}} \sum_{i=1}^{i^{l-1} (l_s - 1)} \sum_{j_s=1}^{j_s} \sum_{j_{sa}=1}^{j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{is} - s - \mathbb{k})!}{(n_{is} + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} + \sum_{k=1}^{()} \sum_{j_s=1}^{()} \sum_{j_{sa}=j_{sa}}^{()} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{ik}=n_i+j_{sa}-j_{sa}^s-j_{sa}^{ik}+1}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{()} \frac{(n_i + j_s - s - \mathbb{k} - j_{sa}^s)!}{(n_i + j_s - n - \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

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$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$j_{sa}^{ik} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=j_{sa}+1}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{\binom{D}{l}} \sum_{(j_s=1)}^{\binom{D}{l}} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{\binom{D}{l}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_s}$$

$$\frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)!(n - s)!} \cdot \frac{\binom{D-l_i}{D+s-n-\mathbb{k}-j_{sa}^s}}{(D+s-n-\mathbb{k}-j_{sa}^s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{S_{j_s, j^{sa}}} = \sum_{k=1}^{l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-k+1} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - l_k)!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - l_k - j_{sa}^{ik})! \cdot (n + j_{sa}^{ik} - j_s)!} \cdot \frac{(l_s - l_i - 1)!}{(l_s - l_i - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa}^{ik})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{()} \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}}^{()} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}}^{()} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - l_k)!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - l_k - j_{sa}^{ik})! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n+1 \wedge l_i < l_i - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n+1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^k, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k} = \dots) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} l_{ik+j_{sa}-k-j_{sa}^{ik}+1} \sum_{j_{sa}=j_{sa}+1}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - lk)!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - lk - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_s - s)!} + \sum_{k=0}^{\binom{()}{j_s=1}} \sum_{j_{sa}^{lk}} \sum_{n_i=n+l_k}^n \sum_{\binom{()}{n_{ik}=n_i+j_{sa}^{lk}-j_{sa}-j_s-j_s}} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - lk)!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - lk - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee \\ & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee \\ & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \end{aligned}$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq s + \mathbb{k} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \wedge$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}} \frac{(n_{ik} + j_{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - lk)!}{(n_{ik} + j_{sa} + j_{sa}^{ik} - n - j_{sa} - lk - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_s - s)!} + \sum_{k=0}^{\binom{()}{j_{sa}^s}} \sum_{\binom{()}{j_{sa}^s}} \sum_{\binom{()}{j_{sa}^s}} \frac{\sum_{n_i=n+l_k}^n \sum_{\binom{()}{n_{ik}=n_i+j_{sa}^s-j_{sa}^{ik}+j_{sa}^{lk}-j_{sa}-lk}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}} (n_{ik} + j_{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - lk)!}{(n_{ik} + j_{sa} + j_{sa}^{ik} - n - j_{sa} - lk - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s < D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{lk} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = lk = 0) \wedge$$

$$j_{sa}^s - j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$j_{sa}^s = s) \vee$$

$$(D \geq n < n \wedge I = lk > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, lk, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, lk, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j^{sa}-1}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_i=j_s-1)}^{(n_i-j_s+1)} \sum_{(n_i=j_s-1)}^{(n_i-j_s+1)} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n - j_s - s - \mathbb{k})!} \cdot \frac{(n_i - j_s + 1)! \cdot (j_s - 2)!}{(n_i - j_s + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=l}^{(n_i-j_s+1)} \sum_{(j_s=1)}^{(n_i-j_s+1)} \sum_{j^{sa}=j_{sa}}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(n_i-j_s+1)} \frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$((D \geq n) \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_{z^{sa}}^{SD} = \sum_{k=1}^{sa-k-j_{sa}+2} \sum_{(j_s=2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{\infty} \sum_{j_s=1}^{(\cdot)} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}}$$

$$\frac{(n_{ik} + j_{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j_{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s) (n - s)!}$$

$$\frac{(D - l_i)}{(D + s - n - \dots - s)!}$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z^{DSD} S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{l-1} \binom{l-1}{l_{ik}} \binom{j_{sa}^{ik}+2}{j_s=2} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j_{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_s^s)! \cdot (n + j_{sa}^s - s - j_s)!}{(l_s - k - 1)! \cdot (l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l}^{() } \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{() } \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} \sum_{l=1}^{i-1} \sum_{(j_s=2)}^{-k+1} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j_{sa}^s + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} +$$

$$\sum_{k=l}^{()} \sum_{(j_s=1)} \sum_{j_{sa}^s=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^s-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_{ik} + j^{sa} + j_{sa}^{ik} - j_{sa} - j_s - s - \mathbb{k})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z \dots (1)) \Rightarrow$

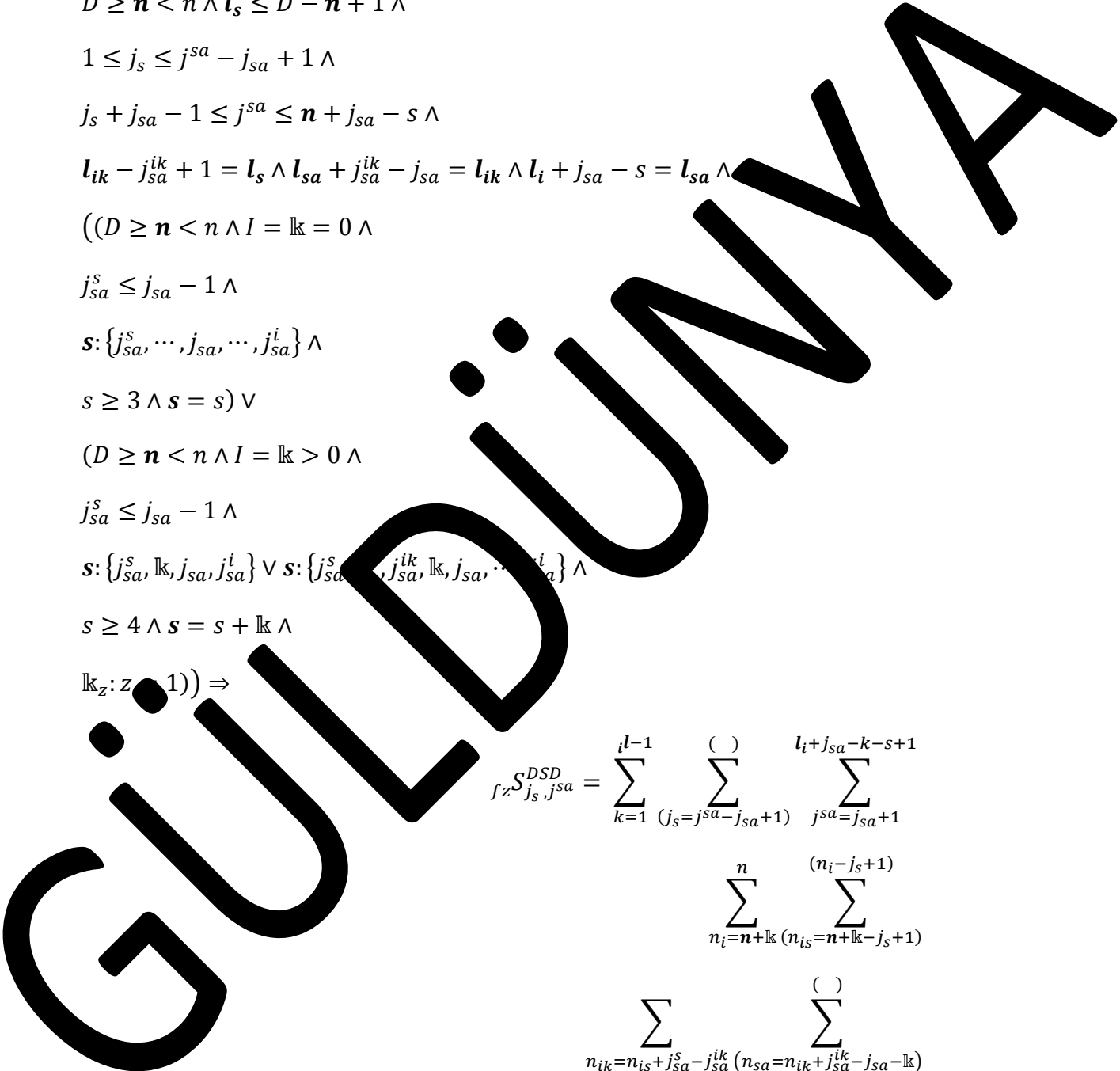
$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i^l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\)} \sum_{j_{sa}=j_{sa}+1}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\)}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$



$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - \mathbb{k} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - \mathbb{k} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq (D + s - n)) \wedge$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^{s})!}{(n_{ik} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^{s})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \frac{(l_s - j_s + 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^{s} - n - l_i - j_{sa}^{s})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^{s})!}{(n_{ik} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^{s})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_s - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_s^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}, \mathbb{k}, j_{sa}, \dots, j_s^i\} \wedge$$

$$s \geq s + \mathbb{k} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk}}} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^s + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2k + 1)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} + \sum_{k=0}^{\binom{()}{j_s=1}} \sum_{j_{sa}^s=j_{sa}} \frac{\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{ik}=n_i+j_{sa}^s-j_{sa}^{ik}+j_{sa}^{-lk}, n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk}}} (n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^s + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee \\ & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee \\ & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge \end{aligned}$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0) \vee$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_s^i\} \vee s: \{j_s^i, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq s + \mathbb{k} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \wedge$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^s + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} + \dots$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{ik}=n_i+j_{sa}^s-j_{sa}^{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-\mathbb{k}}} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^s + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{sa}^s - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{lk} + 1 = l_s \wedge l_{sa}^s + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$

$j_{sa}^s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i^{l-1} (l_i - k - s + 2)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j^{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik})}^{(n_{ik}+j_{sa}^{ik}-j_{sa}^{s})} \frac{(n_{ik} + j_{sa}^{ik} - j_{sa}^{s})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - \mathbb{k} - j_{sa}^{s})! \cdot (n_{is} + j_{sa}^{s} - s)!} \cdot \frac{(l_i - k - 1)!}{(l_i - j_s - 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i) \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=i}^{(l)} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^{s})!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^{s})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n) \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz^{D, j_{sa}^{sa}} = \sum_{k=1}^{sa-k-j_{sa}+2} \sum_{(j_s=2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^s + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} +$$

$$\sum_{k=1}^n \sum_{j_s=1}^{()} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} + j_{sa}^{ik} - j_{sa} - s)!} \cdot \frac{(D - l_i)}{(D + s - n - j_{sa} - j_{sa}^{ik} - s)!}$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$c_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik} + j_{sa}^{ik} + 2)} \sum_{j_{sa}=j_s + j_{sa} - 1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} +$$

$$\sum_{k=l}^{()} \sum_{(j_s=1)} \sum_{j_{sa}^s=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^s-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} \sum_{l=1}^{i-1} \sum_{(j_s=2)}^{-k+1} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_{sa}^{ik} - n - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} +$$

$$\sum_{k=l}^{()} \sum_{(j_s=1)} \sum_{j_{sa}^s=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^s-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$



$$\frac{(n_{ik} + j_{sa}^{ik} - s - \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j^{sa} + j_{sa}^{ik} - \mathbf{n} - j_{sa} - \mathbb{k} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z \dots (1)) \Rightarrow$$

$$f_z \mathcal{S}_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i^l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\)} \sum_{j_{sa}=j_{sa}+1}^{l_i+j_{sa}-k-s+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=\mathbf{n}_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=\mathbf{n}_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\)}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - \mathbf{n} - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(\mathbf{n} + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{()} \sum_{i=1}^{()} \sum_{j^{sa}=j_s}^{()} \sum_{l_i=l_s}^{()} \sum_{l_{sa}=l_s-k}^{()} \frac{(2 \cdot n_i + j_{sa} - n_{ik} - j_s - j^{sa} - j_{sa}^{lk} - s - k + 2)!}{(2 \cdot n_i + j_{sa} - n_{ik} - j^{sa} - n - l_{ik} - k - j_{sa}^{lk} - 2)! \cdot (n - s)!} \cdot \frac{(D - s - n - l_i)!}{(n - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee \\ & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} < n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge \\ & l_i \leq D + s - n)) \wedge \end{aligned}$$

$$\begin{aligned} & ((D \geq n < n \wedge I = k = 0 \wedge \\ & j_{sa}^s \leq j_{sa} - 1 \wedge \\ & s \in \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\} \wedge \\ & s \geq 3 \wedge s = s) \vee \\ & (D \geq n < n \wedge I = k > 0 \wedge \\ & j_{sa}^s \leq j_{sa} - 1 \wedge \end{aligned}$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$(\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=j_{sa}+}^{l_{sa}-k+1} \sum_{n_i=n_i}^n \sum_{n_{ik}=n_{ik}}^{(n_{sa}=n_{sa}+j_{sa}+1)} \frac{(2 \cdot n_i + j_s + n_{ik} - j_{sa} - s - j_{sa}^i)!}{(2 \cdot n_i + 2 \cdot j_s + j_{sa} - n_{ik} - j_{sa} - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=1}^{()} \sum_{(j_s=1)}^{()} \sum_{j_{sa}=j_{sa}} \sum_{n_i=n_i+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(2 \cdot n_i + j_{sa} - n_{ik} - j_s - j_{sa} - j_{sa}^{ik} - s - \mathbb{k} + 2)!}{(2 \cdot n_i + j_{sa} - n_{ik} - j_{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s + 2)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\cdot)} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(\cdot)} \sum_{(n_{sa}=n_{ik}+j_{sa}-\mathbb{k})}^{(n_{sa}-j_{sa}+1)} \frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - \mathbb{k} - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \mathbb{k})!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)} \sum_{j^{sa}=j_{sa}}^{(\cdot)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{(\cdot)} \frac{(2 \cdot n_i + j_{sa} - n_{ik} - j_s - j^{sa} - j_{sa}^{ik} - s - \mathbb{k} + 2)!}{(n_i + j_{sa} - n_{ik} - j^{sa} - \mathbb{k} - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s + 2)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n) \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$l_{sa} = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n-\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{()} \sum_{(n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{()} \frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j_s - j_{sa} - s - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j_s - j_{sa} - s - \mathbb{k})!} \frac{1}{(j_{sa} - s - j_s)!} \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{()} \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}}^{()} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{()} \frac{(2 \cdot n_i + j_{sa} - n_{ik} - j_s - j^{sa} - j_{sa}^{ik} - s - \mathbb{k} + 2)!}{(2 \cdot n_i + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa} + 2)! \cdot (n - s)!} \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

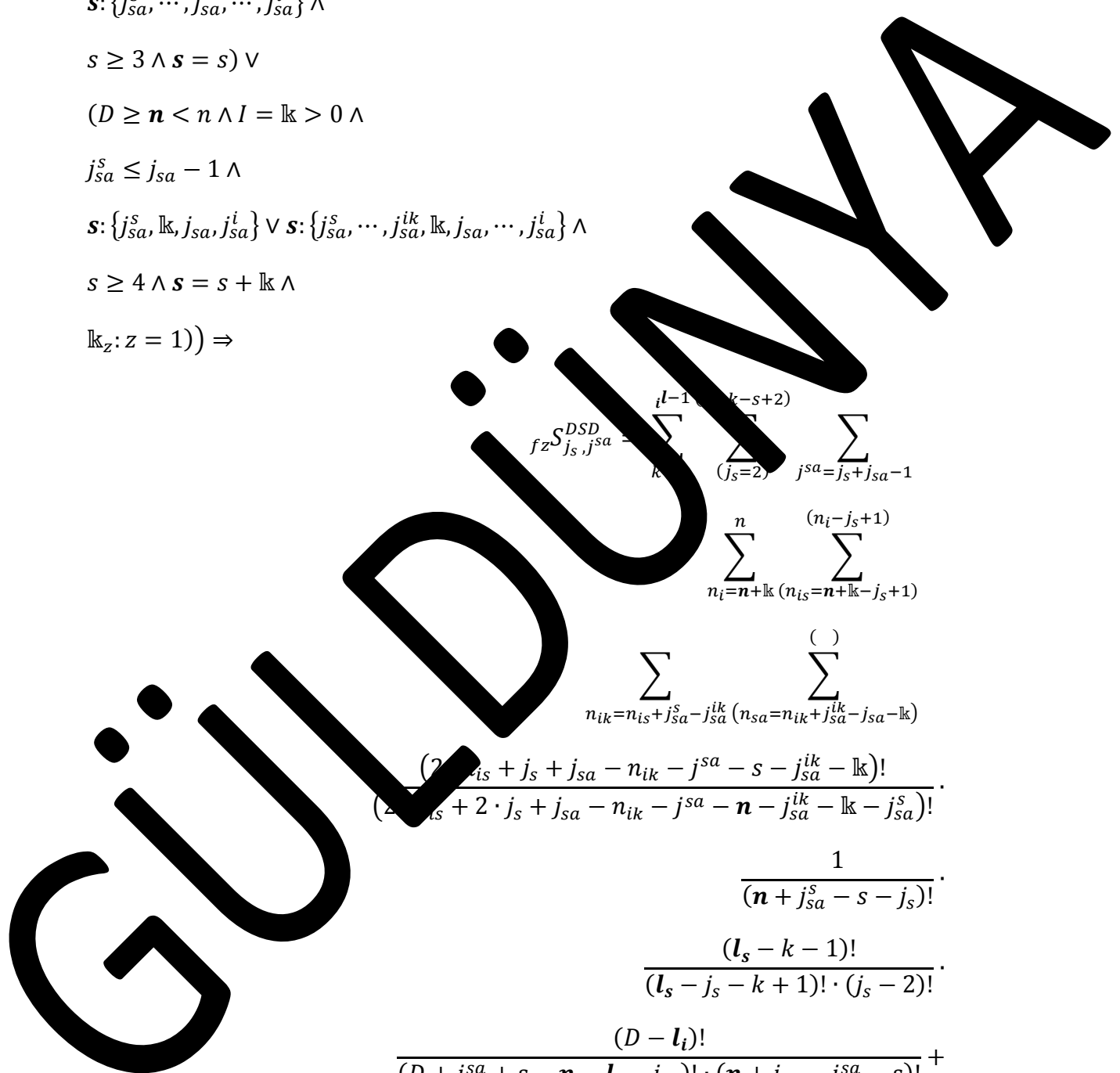
$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(k-s+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j_{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j_{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \sum_{j_{sa}=j_{sa}}$$



$$\sum_{n_i = n + \mathbb{k}}^n \sum_{\binom{()}{n_{ik} = n_i + j_{sa} - j_{sa} - j_{sa}^{ik} + 1}} \sum_{n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k}} \frac{(2 \cdot n_i + j_{sa} - n_{ik} - j_s - j^{sa} - j_{sa}^{ik} - s - \mathbb{k} + 2)!}{(2 \cdot n_i + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s + 2)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} \wedge (l_i - j_{sa} - s > -1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} \wedge (l_i - j_{sa} - s > -1) \vee$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 1 \wedge (s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge (s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{DSD} S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_i+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^s)}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^s)} \frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{(n - s - j_s)!}{(n - s - j_s - \mathbb{k} - 1)!} \cdot \frac{(l_s - j_s - n - 1)! \cdot (j_s - 2)!}{(D - l_i)!} + \frac{(D + s - n - l_i - j_{sa} - (n + j_{sa} - s))!}{(D + s - n - l_i - j_{sa} - (n + j_{sa} - s))!} + \sum_{k=i}^l \sum_{(j_s=1)}^{(j_s=1)} \sum_{j^{sa}=j_{sa}}^{j^{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(n_i=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(2 \cdot n_i + j_s - n_{ik} - j_s - j^{sa} - j_{sa}^{ik} - s - \mathbb{k} + 2)!}{(2 \cdot n_i + j_s - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s + 2)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$(D \geq n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1))$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - lk)!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - lk - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (D + j_{sa} - j^{sa} - 1) +}$$

$$\sum_{k=l}^{()} \sum_{a=j_{sa}}$$

$$\sum_{n_i=n+lk} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}$$

$$\frac{(2 \cdot n_i + j_{sa} - n_{ik} - j_s - j_{sa}^{lk} - s - lk + 2)!}{(2 \cdot n_i + j_{sa} - n_{ik} - j_s - n - j_{sa}^{lk} - lk - j_{sa}^s + 2)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$(D \geq n < n) \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s + j_{sa}^{ik} - j_{sa} = l_{ik} \vee$$

$$(D \geq n < n) \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^i\}$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$I = \mathbb{k} \wedge I = \mathbb{k} \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\frac{\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\cdot)} \frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{(n_{is} - j_s - 1)!}{(n_{is} - j_s)!} \cdot \frac{(n_{ik} - j_s - 1)!}{(n_{ik} - j_s - 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i - j_{sa} - (n + j_{sa} - s))!} + \sum_{k=i}^l \sum_{(j_s=1)}^{(\cdot)} \sum_{j^{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(2 \cdot n_i + j_s - n_{ik} - j_s - j^{sa} - j_{sa}^{ik} - s - \mathbb{k} + 2)!}{(n_i + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s + 2)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_s \leq D - \dots + 1 \wedge$

$1 \leq j_s < j_{sa} - j_s - 1 \wedge$

$j_s + j_{sa} - \dots < j^{sa} \leq n + j_{sa} - s \wedge$

$\dots - j^{ik} \dots = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{S_{j_s, j^{sa}}} = \sum_{k=1}^{l-1} \binom{l_i + j_{sa} - k - s + 1}{j_s = j_{sa} + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{n_{sa} = n_{ik} + j_{sa} - j_{sa} - \mathbb{k}}^{(n_i - j_s + 1)} \frac{(2 \cdot n_i + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_i + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{l_i} \sum_{j_s=1}^{()} \sum_{j^{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k}}^{()} \frac{(2 \cdot n_i + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_i + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$

$l_i \leq D + s - n)) \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s < j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s \wedge \mathbb{k} \wedge$

$\mathbb{k}_{s-1} = \dots) \Rightarrow$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=j_{sa}+1}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - lk)!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{lk} - lk - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s - 1)!} +$$

$$\sum_{k=l_i}^{()} \sum_{a=j_{sa}}^{()}$$

$$\sum_{n_i=n+l_k}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}^{()}$$

$$\frac{(2 \cdot n_i + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - lk)!}{(2 \cdot n_i + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{lk} - lk - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq l_i < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s - j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{lk} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq l_i < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{lk} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1))$$

$$f_z^{DSD}_{j_s, j^{sa}} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}}$$

$$\frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{lk} - lk)!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{lk} - lk - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s - 1)! +}$$

$$\sum_{k=l_i}^{\binom{()}{j_s}} \sum_{a=j_{sa}}$$

$$\sum_{n_i=n+l_k} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}}$$

$$\frac{(2 \cdot n_i + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{lk} - lk)!}{(2 \cdot n_i + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{lk} - lk - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{lk} + 1 = l_s \wedge l_{sa} + j_{sa}^{lk} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{lk} + 1 = l_s \wedge l_{sa} + j_{sa}^{lk} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 3 \wedge s = s + 1) \vee$$

$$(D > n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\)} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}}^{(\)} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{(\)} \frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - \mathbf{n} - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(\mathbf{n} + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \mathbf{n})!}{(D + j^{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{(\)} \sum_{(j_s=1)}^{(\)} \sum_{j^{sa}=j_{sa}}^{(\)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\)} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik})}^{(\)} \frac{(2 \cdot n_i + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_i + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - \mathbf{n} - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(\mathbf{n} + j_{sa}^s - s - j_s)!} \cdot \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (\mathbf{n} - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

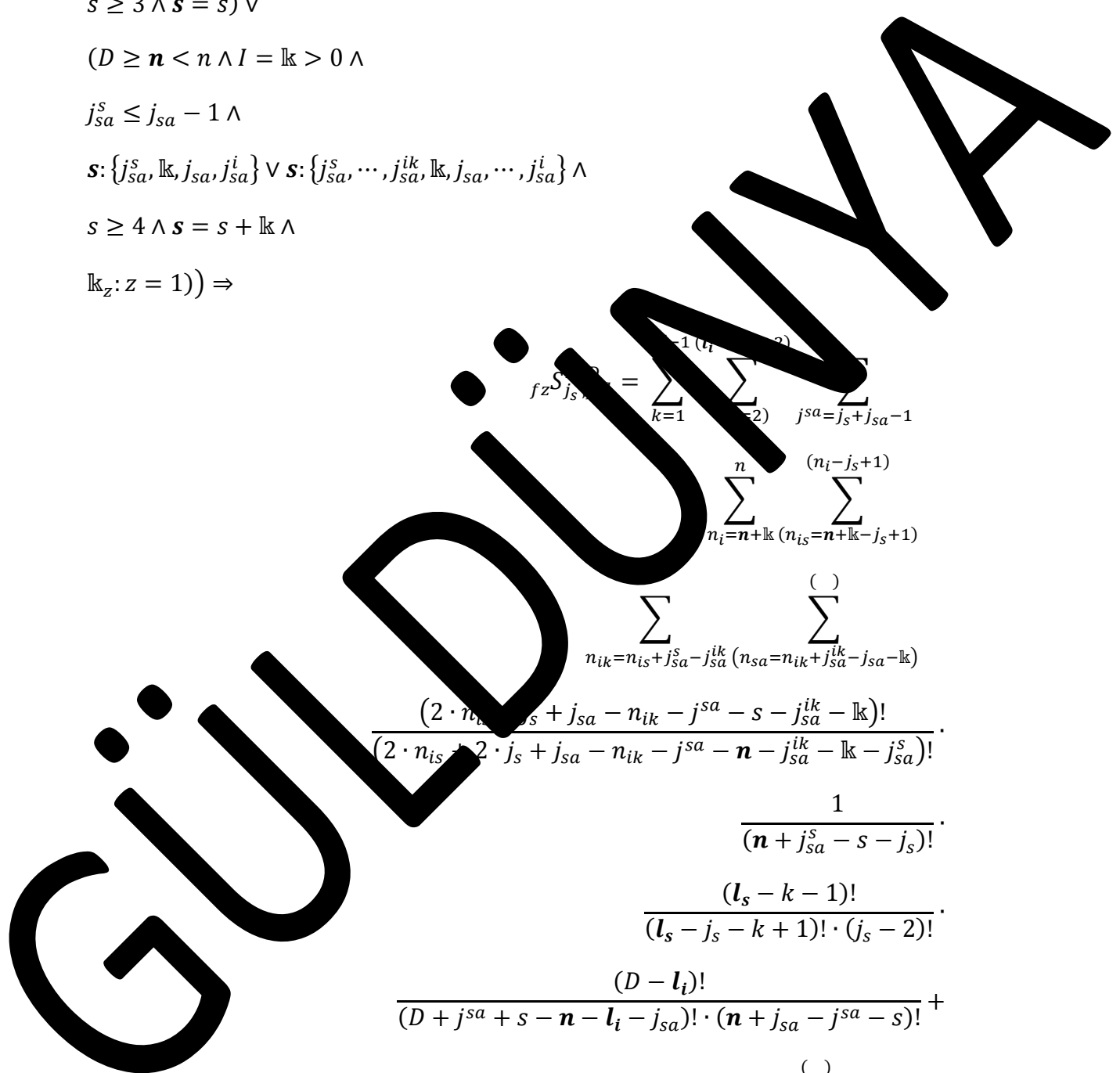
$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz_{j_{sa}^s} = \sum_{k=1}^{l_s-1} \sum_{j_{sa}=j_s+j_{sa}-1}^{(l_s-2)} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j_{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j_{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=1}^{()} \sum_{j_s=1}^{()} \sum_{j_{sa}=j_{sa}}$$



$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} (2 \cdot n_i + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})! \cdot \frac{1}{(n + j_{sa}^s - s - j_{sa}^s)!} \cdot \frac{(D - l_i)}{(D + s - n - l_i)! (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n))$$

$$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i^{l-1} (l_s - k - j_{sa} + 2)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_i+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-l_k)}^{(n_{sa}=n_{ik}+j_{sa}-l_k)} \frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - l_k)!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - l_k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - j_{sa}^{ik} - l_k)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - s)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{i^l} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}} \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}-l_k)}^{(n_{sa}=n_{ik}+j_{sa}-l_k)} \frac{(2 \cdot n_i + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - l_k)!}{(2 \cdot n_i + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - l_k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$$

$$s \geq 3 \wedge (s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_s^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_s^i\} \wedge$$

$$j_{sa}^s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{()} \\
 & \frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - l_k)!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - l_k - j_{sa}^s)!} \cdot \\
 & \frac{(n - s - j_s)!}{(n - s - j_s - 1)!} \cdot \frac{(n - k - 1)!}{(n - j_s - n_{ik} - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + s - n - l_i - j_{sa} - (n + j_{sa} - s))!} + \\
 & \sum_{k=1}^i \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k)} \\
 & \frac{(2 \cdot n_i + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - l_k)!}{(2 \cdot n_i + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - l_k - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
 \end{aligned}$$

$$\begin{aligned}
 & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\
 & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\
 & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\
 & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee \\
 & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\
 & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge
 \end{aligned}$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(2 \cdot n_{is} + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(D - l_s + k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_s + j_s - k + 1)!}{(D + j_{sa}^s - n - j_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=i^l}^{()} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(2 \cdot n_i + j_s + j_{sa} - n_{ik} - j^{sa} - s - j_{sa}^{ik} - \mathbb{k})!}{(2 \cdot n_i + 2 \cdot j_s + j_{sa} - n_{ik} - j^{sa} - n - j_{sa}^{ik} - \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = k = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, k, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + k \wedge$$

$$k_z: z = 1) \Rightarrow$$

$$S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_{sa}-j_{sa}+1)}^{(j_{sa}-j_{sa}+1)} \sum_{j_{sa}=j_{sa}+1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)} \frac{(n_{sa} + j_{sa} - j_s - s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} +$$

$$\sum_{k=l}^{()} \sum_{(j_s=1)}^{()} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k}$$

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$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$

$l_i \leq D + s - n)) \wedge$

$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

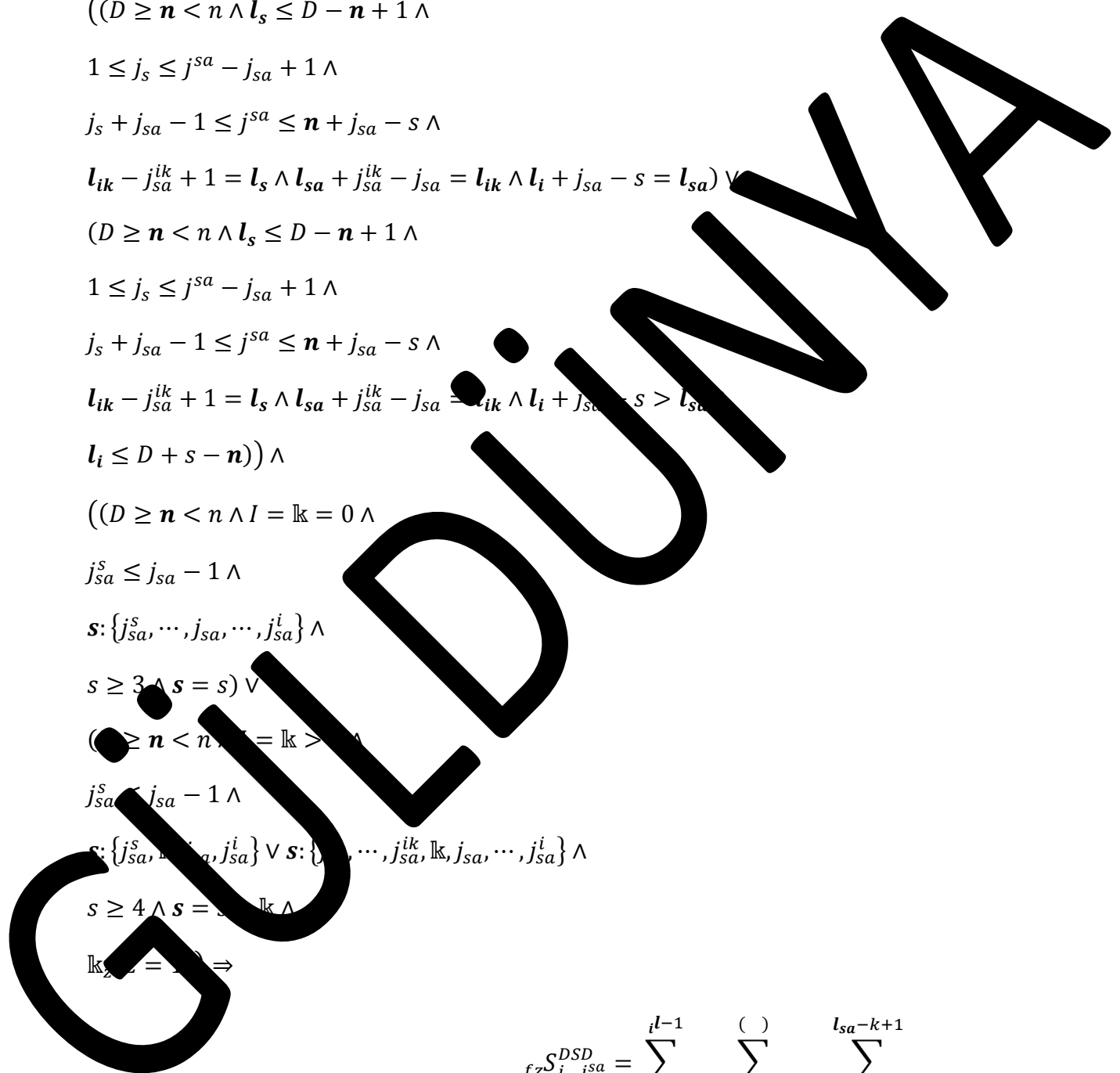
$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s \wedge \mathbb{k} \wedge$

$\mathbb{k} \geq 2 = \mathbb{k} \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$



$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk}}} \frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_s - s)!} + \sum_{k=1}^n \sum_{(j_s=1)}^n \sum_{j^{sa}=j_{sa}}^n \frac{\sum_{n_i=n+l_k}^n \sum_{\binom{()}{n_{ik}=n_i+j_{sa}^{lk}-j_{sa}^{-lk}}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk}}} (n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$- j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)} \frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}-j_{sa}-l_k}^{()}$$

$$\frac{(n_{sa} + j^{sa} - j_s - 1)!}{(n_{sa} + j^{sa} - n - j_s - 1)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee \end{aligned}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & l_{sa} \leq D + j_{sa} - n - l_i \leq D + s - n) \vee \end{aligned}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge \\ & l_{ik} = D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee \end{aligned}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \end{aligned}$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - \mathbf{n} \wedge l_i \leq D + s - \mathbf{n})) \wedge$$

$$((D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=j_{sa}+1}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - \mathbf{n} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}-j_{sa}-l_k}^{()} \frac{(n_{sa} + j^{sa} - j_s - 1)!}{(n_{sa} + j^{sa} - n_{ik} - 1)! \cdot (j_s - s)!} \cdot \frac{(D - l_i)!}{(D + s - j_s - l_i)! \cdot (n - j_s - l_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_s - 1 = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{ik} \wedge$$

$$((D \geq n < n \wedge l = l_k = 0$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + 1 \vee$$

$$(D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, l_k, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, l_k, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge l_k = s + l_k \wedge$$

$$l_{k_z}: z = 1) \Rightarrow$$

$$f_{zS}^{DSD} = \sum_{k=1}^{i^{l-1} (l_i - k - s + 2)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{is}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{is})}^{()}$$

$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_s^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=l}^j \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{is}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{is})}^{()}$$

$$\frac{(n_{sa} + j^{sa} - j_s - s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_i \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz_{j_s, j_{sa}}^{DS_{j_s, j_{sa}}} = \sum_{i=1}^{i_{sa}^s} \sum_{(j_s)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()} \frac{(n_{sa} + j_{sa} - j_s - s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} + \sum_{k=1}^k \sum_{(j_s=1)}^{()} \sum_{j_{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik}-j_{sa}^{ik}+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{sa} + j_{sa} - j_s - s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n - s)!}$$

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$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_s^s \leq j_{sa}^s - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-} \sum_{n_i=n}^n \sum_{n_{ik}=n_i+j_{sa}-j_{sa}-j_{sa}^{ik}}^{(n_{sa}=n_i+j_{sa}-j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{sa} + j_{sa} - j_s - s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s) \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} + \sum_{k=l}^{()} \sum_{(j_s=1)} \sum_{j_{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_{sa} + j_{sa} - j_s - s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D - n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge l_s = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \sum_{j_{sa}=j_s+j_{sa}-} \sum_{n_i=n}^n \sum_{n_{ik}=n}^{(j_s+1)} \sum_{n_{sa}=n}^{(j_s+1)} \frac{(n_{sa} + j_{sa} - j_s - s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} + \sum_{k=1}^{(j_s+1)} \sum_{(j_s=1)} \sum_{j_{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}-j_{sa}^{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_{sa} + j_{sa} - j_s - s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz \sum_{j_s, j_{sa}}^{DS} \sum_{i=1}^{l_s} \sum_{(j_s=j_s^s, \dots, j_{sa}+1)} \sum_{j_{sa}=j_{sa}+1}^{l_s-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} + \sum_{k=1}^{()} \sum_{(j_s=1)}^{()} \sum_{j_{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!}$$

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$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge l = k = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, k, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + k \wedge$$

$$k_z: z = 1, \dots, k \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=j_{sa}+1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)}$$

$$\frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - l_i)!}$$

$$\sum_{k=i}^n \sum_{(j_s=1)}^{()} \sum_{s_a=j_{sa}}^{()} \sum_{n_i=n+k}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{ik}+j_{sa}-j_{sa}^{ik}}^{()} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

- $((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$
- $l_i \leq D + s - n) \vee$
- $((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$
- $l_i \leq D + s - n) \vee$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{DSD} S_{j_s, j_s^s} = \sum_{k=1}^{i^l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} +$$

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$$\sum_{k=i}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)}{(D + s - n - j_{sa}^s)! \cdot (n - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \end{aligned}$$

$$\begin{aligned} & l_{sa} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee \\ & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \end{aligned}$$

$$\begin{aligned} & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge \\ & l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee \\ & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \end{aligned}$$

$$\begin{aligned} & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee \end{aligned}$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_{s, j_{sa}}^{SD} = \sum_{k=1}^{i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\cdot)} \sum_{j_{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(\cdot)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\cdot)} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} +$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_s} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)}{(D + s - n_{sa} - 1)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} = l_{sa}$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$(\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk}}} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} + \sum_{k=1}^n \sum_{\binom{()}{j_s=1}} \sum_{j_{sa}=j_{sa}^s} \frac{\sum_{n_i=n+l_k}^n \sum_{\binom{()}{n_{ik}=n_i+j_{sa}^s-j_{sa}^{ik}}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}^{-lk}}} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa}^s + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa}^s + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa}^s \leq n + j_{sa} - s \wedge$$

$$- j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge l = lk = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

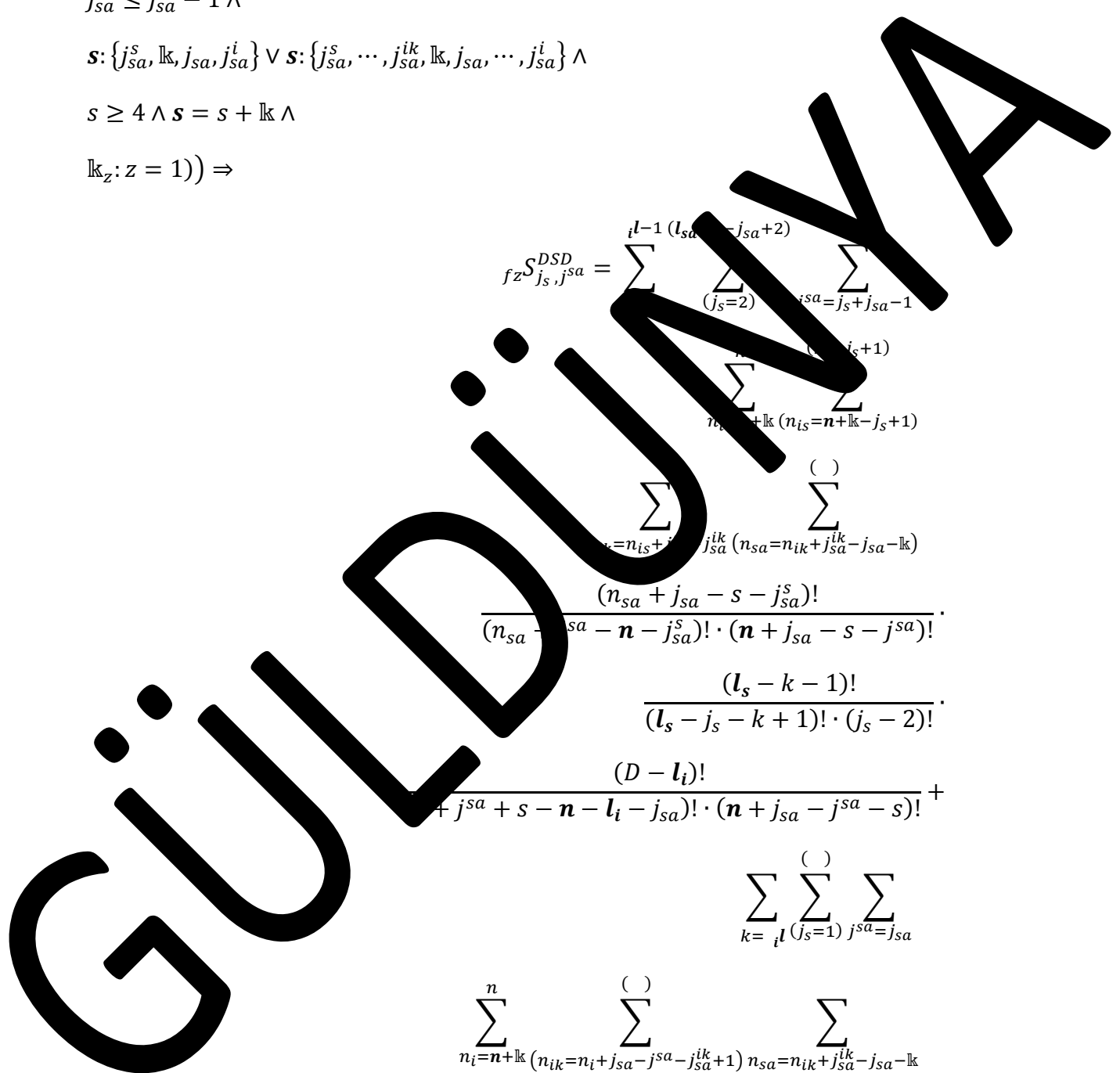
$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{(j_s=2)}^{i-1} \sum_{j_{sa}=j_s+j_{sa}-1}^{(l_{sa}-j_{sa}+2)} \sum_{n_{is}=\mathbb{k}}^{(i_s+1)} \sum_{n_{sa}=\mathbb{k}}^{(n_{is}+\mathbb{k}-j_s+1)} \sum_{n_{sa}=\mathbb{k}}^{(n_{sa}=\mathbb{k}+j_{sa}^i-j_{sa}-\mathbb{k})} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} + \sum_{k=1}^{(i)} \sum_{(j_s=1)} \sum_{j_{sa}^s=j_{sa}} \sum_{n_i=\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^i-j_{sa}^i+1)}^{(i)} \sum_{n_{sa}=\mathbb{k}}^{(n_{sa}=\mathbb{k}+j_{sa}^i-j_{sa}-\mathbb{k})} \frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j_{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$



$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$j_{sa}^s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{l-1} \binom{l-k-j_{sa}^{ik}+2}{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}^{s-1}} \sum_{n_i=n+\mathbb{k}}^n \binom{n_i-j_s+1}{(n_i=n+\mathbb{k}-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}}{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik})} \frac{(n_{ik}+j_{sa}^{ik}-j_{sa}^{ik})!}{(n_{ik}+j_{sa}^{ik}-j_{sa}^{ik})! \cdot (n_{ik}+j_{sa}^{ik}-j_{sa}^{ik})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(n+j_{sa}-j^{sa}-s)!} + \sum_{k=1}^{l-1} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}} \binom{n_{ik}+j_{sa}^{ik}-j_{sa}^{ik}}{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_{sa}+j_{sa}-s-j_{sa}^s)!}{(n_{sa}+j^{sa}-n-j_{sa}^s)! \cdot (n+j_{sa}-s-j^{sa})!} \cdot \frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}$$

$((D \geq n < n) \wedge l_s \leq D - n + 1 \wedge$

$1 - j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$I = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i\} \wedge$$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s + j^{sa-1}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{i_s}+j_{sa}^s - j_{sa}^{i_k}} \sum_{(n_{i_k}=n_{i_s}+j_{sa}^{i_k} - j_{sa}^s)}$$

$$\frac{(n_{i_s} + j_{sa} - n - j_{sa}^s)! \cdot (n_{i_s} + j_{sa} - j_{sa}^s)!}{(l_s - k - 1)! \cdot (l_s - j_s - 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(n_{sa} + s - n - l_i - j_{sa}^s) \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^{()} \sum_{(n_{ik}=n_i + j_{sa} - j^{sa} - j_{sa}^{i_k} + 1)} \sum_{n_{sa}=n_{ik} + j_{sa}^{i_k} - j_{sa} - \mathbb{k}}$$

$$\frac{(n_{sa} + j_{sa} - s - j_{sa}^s)!}{(n_{sa} + j^{sa} - n - j_{sa}^s)! \cdot (n + j_{sa} - s - j^{sa})!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{i_k} + 1 = l_s \wedge l_{sa} + j_{sa}^{i_k} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i_l-1} \sum_{j_{sa}=j_{sa}+1}^{l_i+j_{sa}-k-s} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(2 \cdot n_{is} + j_s - n_{sa} - j_{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j_{sa} - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (\mathbf{n} + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa} - s)!} + \sum_{k=1}^i \sum_{j_s=1}^{(i)} \sum_{j_{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{ik}=n_i+j_{sa}-j_{sa}-j_{sa}^{ik}+1}^{(i)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(2 \cdot n_i - n_{sa} - j_s - j_{sa} - s - 2 \cdot \mathbb{k} + 2)!}{(2 \cdot n_i - n_{sa} - j_{sa} - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s + 2)! \cdot (\mathbf{n} - s)!}$$

GÜLDÜMÜNYA

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge l = k = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, k, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + k \wedge$$

$$k_z: z = 1, \dots, k \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=j_{sa}+1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot k)!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot k - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s - l_i)!}$$

$$\sum_{k=i}^{()} \sum_{j_s=1}^{()} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n_i+j_s-j_{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}-j_{sa}-k}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot k - 2)!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot k - j_{sa}^s + 2)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

- $((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$
- $((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$
- $l_i \leq D + s - n) \vee$
- $((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$
- $l_i \leq D + s - n) \vee$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_s}^{DSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s = j^{sa} - j_{sa} + 1)}^{()} \sum_{j_{sa} = j_{sa} + 1}^{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1}$$

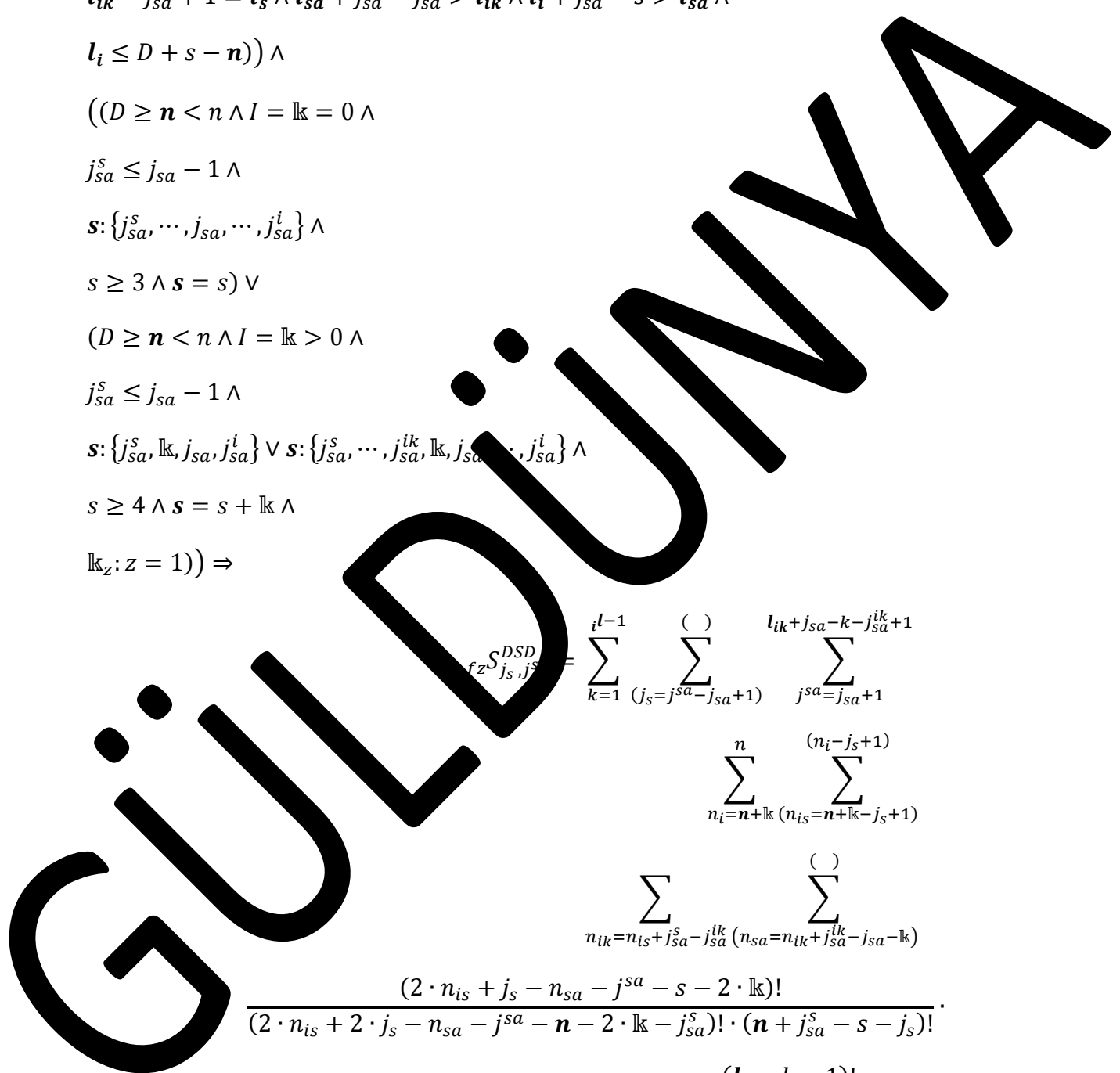
$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$



$$\sum_{k=1}^n \sum_{j_s=1}^{()} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}} \frac{(2 \cdot n_i - n_{sa} - j_s - j^{sa} - s - 2 \cdot \mathbb{k} + 2)!}{(2 \cdot n_i - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s + 2)!(n-s)!} \frac{(D-l_i)}{(D+s-n_{ik}+1)!(n-s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n)$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_{s, j_{sa}}^{SD} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^n \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}} (2 \cdot n_i - n_{sa} - j_s - j^{sa} - s - 2 \cdot \mathbb{k} + 2)! \cdot (n-s)! \cdot \frac{(D-l_i)}{(D+s-l_i-1) \cdot (n-s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} = l_{sa}$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$(\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}} \frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot lk)!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot lk - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_s - s)!} + \sum_{k=1}^n \sum_{(j_s=1)}^n \sum_{j^{sa}=j_{sa}}^n \frac{\sum_{n_i=n+lk}^n \sum_{\binom{()}{n_{ik}=n_i+j_{sa}-j_{sa}^{ik}}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}} (2 \cdot n_{is} - n_{sa} - j_s - j^{sa} - s - 2 \cdot lk + 2)!}{(2 \cdot n_{is} - n_{sa} - j_s - j^{sa} - n - 2 \cdot lk - j_{sa}^s + 2)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$((D \geq n < n \wedge l_i \leq D - n + 1) \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_s \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j_s \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$l_i \leq D + s - n)) \wedge$

$((D \geq n < n \wedge l_i = lk = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{(j_s=2)}^{i-1} \sum_{i_{sa}=j_s+j_{sa}-1}^{(l_{sa}-j_{sa}+2)} \sum_{i_{sa}+1}^{(i_s+1)} \sum_{n_{is}+\mathbb{k}}^{(n_{is}+n+\mathbb{k}-j_s+1)} \sum_{i_{sa}+1}^{(i_s+1)} \sum_{n_{is}+\mathbb{k}}^{(n_{is}+n+\mathbb{k}-j_s+1)} \sum_{i_{sa}+1}^{(i_s+1)} \sum_{n_{is}+\mathbb{k}}^{(n_{is}+n+\mathbb{k}-j_s+1)}$$

$$\frac{(2 \cdot n_{is} + j_s \cdot n_{sa} - j_{sa}^s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s \cdot n_{sa} - j_{sa}^s - s - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} +$$

$$\sum_{k=1}^{(i)} \sum_{(j_s=1)}^{(i)} \sum_{j_{sa}^s=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^s-j_{sa}^{ik}+1)}^{(i)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(2 \cdot n_i - n_{sa} - j_s - j_{sa}^s - s - 2 \cdot \mathbb{k} + 2)!}{(2 \cdot n_i - n_{sa} - j_{sa}^s - n - 2 \cdot \mathbb{k} - j_{sa}^s + 2)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

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$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$j_{sa}^s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}^{sa-1}}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik})}^{(n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})} \frac{(2 \cdot n_{is} + j_s - n_{sa} - j_s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j_s - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (j_s - k - 1)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{(l)} \sum_{(j_s=1)}^{(l)} \sum_{j^{sa}=j_{sa}}^{(l)} \sum_{n_i=n+\mathbb{k}}^{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(2 \cdot n_i - n_{sa} - j_s - j^{sa} - s - 2 \cdot \mathbb{k} + 2)!}{(2 \cdot n_i - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s + 2)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n) \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n) \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$j_{sa}^s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j^{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}} \sum_{(n_{ik}+j_{sa}^{ik}-j_{sa}^{ik})}^{(n_{ik}+j_{sa}^{ik}-j_{sa}^{ik})} \frac{(2 \cdot n_{is} + j_s - n_{sa} - j_s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j_s - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n_{is} - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - \mathbb{k} + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i - j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{(i)} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^{(i)} \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(2 \cdot n_i - n_{sa} - j_s - j^{sa} - s - 2 \cdot \mathbb{k} + 2)!}{(2 \cdot n_i - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s + 2)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n + l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n + l_s \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

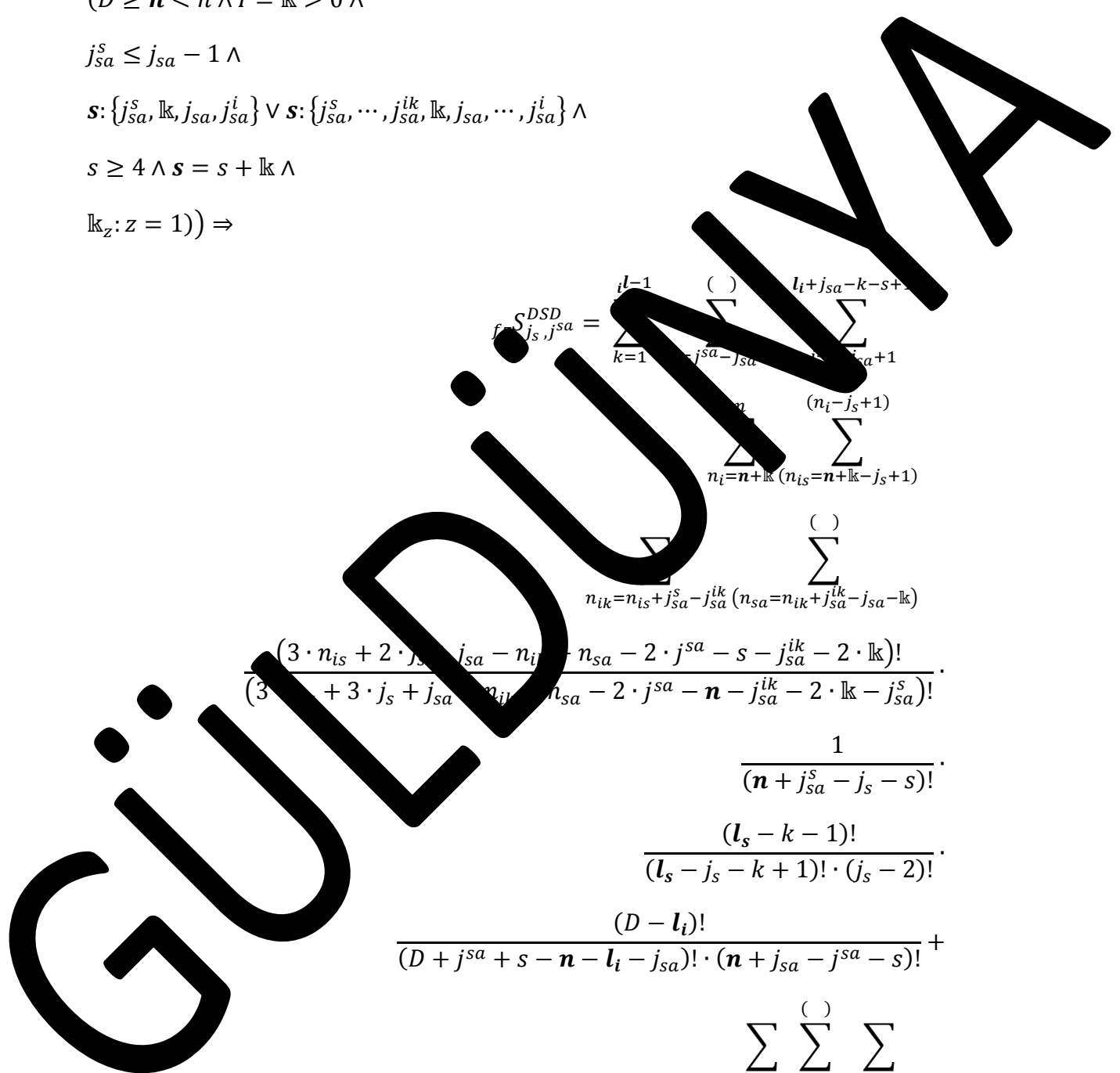
$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i_l-1} \sum_{j_{sa}=j_{sa}+1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(3 \cdot n_{is} + 2 \cdot j_{sa} - j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa} - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{()} \sum_{j_s=1}^{()} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$



$$\frac{(3 \cdot n_i + j_{sa} - n_{ik} - n_{sa} - j_s - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k} + 3)!}{(3 \cdot n_i + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s + 3)!} \cdot \frac{1}{(n-s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^s, j_{sa}^i, j_{sa}^i\}$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^s, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$I = \mathbb{k} \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-k+1}$$

$$\frac{\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^s)}^{(\cdot)} \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot l_k)!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{(n - s - l_i - s)!}{(n - s - l_i - s)!} \cdot \frac{(l_i - j_s - n - 1)! \cdot (j_s - 2)!}{(D - l_i)!} + \frac{(D + s - n - l_i - j_{sa} - (n + j_{sa} - s))!}{(D + s - n - l_i - j_{sa} - (n + j_{sa} - s))!} \sum_{k=1}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)} \sum_{j^{sa}=j_{sa}}^{(\cdot)} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(\cdot)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k}^{(\cdot)} \frac{(3 \cdot n_i + j_{sa} - n_{ik} - n_{sa} - j_s - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot l_k + 3)!}{(3 \cdot n_i + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot l_k - j_{sa}^s + 3)!} \cdot \frac{1}{(n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

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$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

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$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_s^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}, \mathbb{k}, j_{sa}, \dots, j_s^i\} \wedge$$

$$s \geq s + \mathbb{k} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}}$$

$$\frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot lk)!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot lk - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=i}^{\binom{()}{j_s - s}} \sum_{a=j_{sa}}$$

$$\sum_{n_i=n+lk} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}} \sum_{i+1}$$

$$\frac{(3 \cdot n_{is} + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot lk + 3)!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot lk - j_{sa}^s + 3)!}$$

$$\frac{1}{(n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s - j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{K} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}^i\}$$

$$s \geq 3 \wedge s = s + \mathbb{K}) \vee$$

$$(D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{K}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{K} \wedge$$

$$\mathbb{K}_z: z = 1) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\cdot)} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}}^{(\cdot)} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-l_k)}^{(\cdot)}$$

$$\frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot l_k)!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa} - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - s)!}{(D + j^{sa} + s - n - l_i - j_{sa})!} \cdot \frac{(n + j_{sa} - j^{sa} - s)!}{(n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{l-1} \sum_{(j_s=1)}^{(\cdot)} \sum_{j^{sa}=j_{sa}}^{(\cdot)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-l_k)}^{(\cdot)}$$

$$\frac{(3 \cdot n_i + j_{sa} - n_{ik} - n_{sa} - j_s - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot l_k + 3)!}{(3 \cdot n_i + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot l_k - j_{sa}^s + 3)!} \cdot \frac{1}{(n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz_{j_{sa}^s} = \sum_{k=1}^{l_i-1} \sum_{j=2}^{(l_i-k-2)} \sum_{j_{sa}=j_s+j_{sa}-1}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(j_{sa}^{ik} + 2 \cdot j_s + j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa}^s - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa}^{ik} - n_{ik} - n_{sa} - 2 \cdot j_{sa}^s - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} + \sum_{k=1}^{()} \sum_{l_i} \sum_{j_{sa}^s=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(3 \cdot n_i + j_{sa} - n_{ik} - n_{sa} - j_s - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k} + 3)!}{(3 \cdot n_i + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s + 3)!}$$

$$\frac{(D - l_i)}{(D + s - n - l_i)! (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n))$$

$$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i^{l-1} (l_{sa}-k-j_{sa}+2)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_i+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-l_k)}^{(n_{sa}-j_{sa}+1)} \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot l_k)!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{1}{(n + j_s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - s)!}{(D + j^{sa} + s - n - l_i - j_{sa})!} \cdot \frac{(n + j_{sa} - j^{sa} - s)!}{(n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{(n)} \sum_{j^{sa}=j_{sa}} \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-l_k)} \frac{(3 \cdot n_i + j_s - n_{ik} - n_{sa} - j_s - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot l_k + 3)!}{(3 \cdot n_i + j_s - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot l_k - j_{sa}^s + 3)!} \cdot \frac{1}{(n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$$

$$s \geq 3 \wedge (s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > 1 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_s^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_s^i\} \wedge$$

$$j_{sa}^s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^s)}^{(\cdot)} \\
 & \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - \mathbf{n} - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{(n - s - \mathbb{k} - 1)!}{(n - s - \mathbb{k} - 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i - j_{sa})!} \cdot \frac{(n + j_{sa} - s)!}{(n + j_{sa} - s)!} + \\
 & \sum_{k=1}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)} \sum_{j^{sa}=j_{sa}}^{(\cdot)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(\cdot)} \\
 & \frac{(3 \cdot n_i + j_{sa} - n_{ik} - n_{sa} - j_s - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k} + 3)!}{(3 \cdot n_i + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - \mathbf{n} - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s + 3)!} \cdot \\
 & \frac{1}{(n - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (n - s)!}
 \end{aligned}$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-\mathbb{k})}^{(n_{sa}=n_{ik}+j_{sa}-\mathbb{k})} \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - \mathbf{n} - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{(n + j_{sa} - j_s - s)!}{(n + j_{sa} - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} - n - l_i)! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{()} \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k}} \frac{(3 \cdot n_i + j_{sa} - n_{ik} - n_{sa} - j_s - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k} + 3)!}{(3 \cdot n_i + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - \mathbf{n} - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s + 3)!} \cdot \frac{1}{(n - s)!} \cdot \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (n - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{l-1} \binom{l-1}{k} \sum_{j_{sa}=j_{sa}+1}^{l_i+j_{sa}-k-s+1} \sum_{j_{sa}=j_{sa}+1}^{n} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

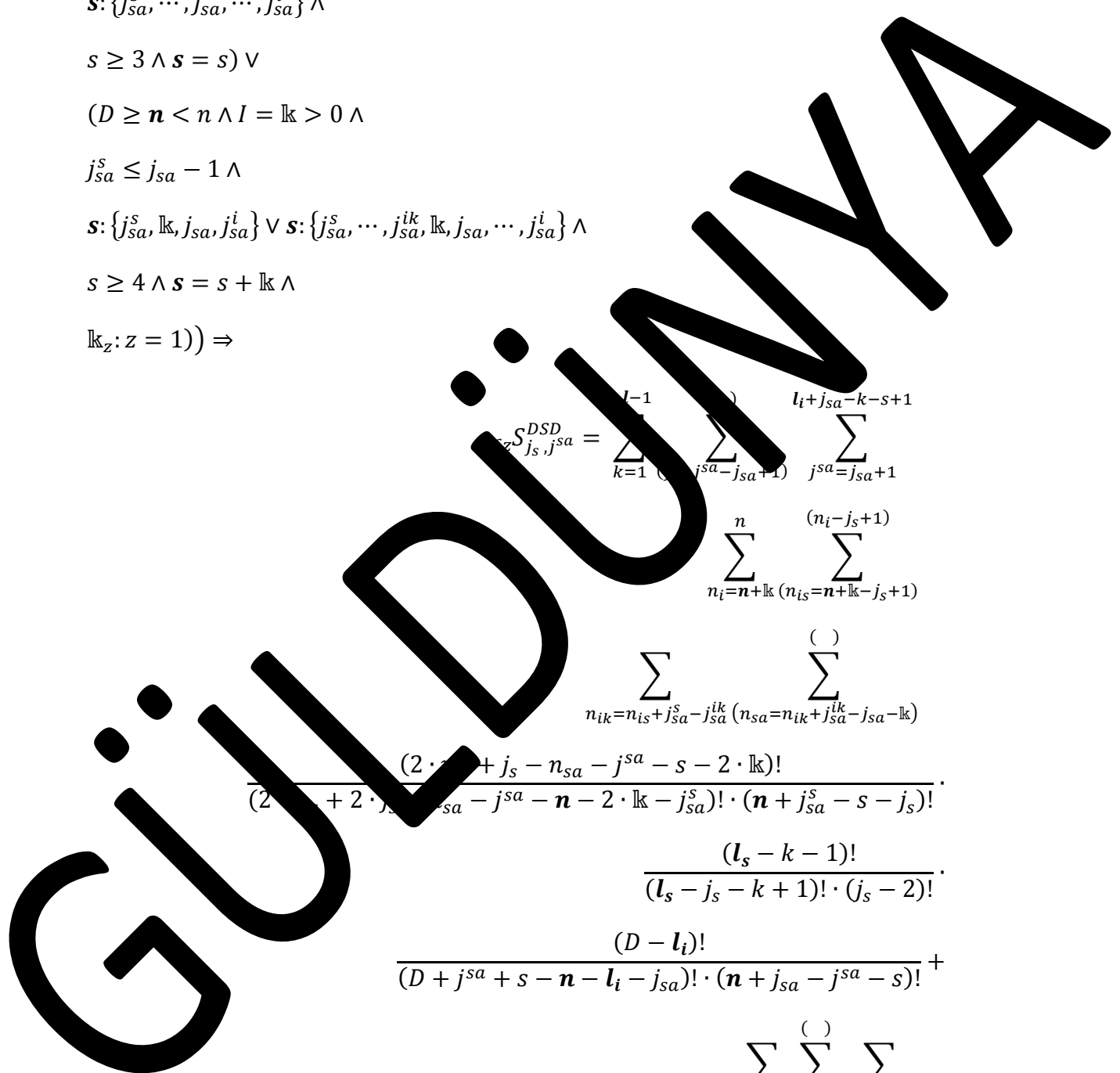
$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot \dots + j_s - n_{sa} - j_{sa}^s - s - 2 \cdot \mathbb{k})!}{(2 \cdot \dots + 2 \cdot j_{sa} - j_{sa}^s - j_{sa}^s - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} +$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)} \sum_{j_{sa}^s=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$



$$\frac{(2 \cdot n_i + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_i + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \vee$$

$$l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s \wedge \mathbb{k} \wedge$$

$$\mathbb{k} \geq 2 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=j_{sa}+1}^{l_{sa}-k+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}} \frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot lk)!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot lk - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_s - s)!} + \sum_{k=1}^n \sum_{(j_s=1)}^n \sum_{j^{sa}=j_{sa}}^n \frac{\sum_{n_i=n+lk}^n \sum_{\binom{()}{n_{ik}=n_i+j_{sa}-j_{sa}^{ik}}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}} (2 \cdot n_i + j_s - n_{sa} - j^{sa} - s - 2 \cdot lk)!}{(2 \cdot n_i + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot lk - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$l_i \leq D + s - n) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\quad)}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{j_s=1}^{()} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}-j_{sa}-l_k}^{()}$$

$$\frac{(2 \cdot n_i + j_s - n_{sa} - j^{sa} - s - 2 \cdot l_k)!}{(2 \cdot n_i + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot l_k - j_s - 1) \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - j_s - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D - n + 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} = D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j_{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(2 \cdot n_i + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_i + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_s - 1) \cdot (j_s - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + s - j_s - l_i)! \cdot (n - j_s)}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_s = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{ik} \wedge$

$((D \geq n < n \wedge l = \mathbb{k} = 0) \vee$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = j_{sa} \vee$

$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge l_{sa} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z^{DSD} S_{j_s j^{sa}} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{is}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa})}^{(\quad)}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_s - s - j_s)!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^l \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}} \sum_{(n_{is}=n_{ik}+j_{sa}^{is}-j_{sa}^{ik}+1)}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{sa}-\mathbb{k})}$$

$$\frac{(2 \cdot n_{is} + j_s - n_{sa} - j^{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j^{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_i \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} +$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

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$$fz_{j_s, j_{sa}}^{DS_{j_s, j_{sa}}} = \sum_{i=1}^{i_{j_s, j_{sa}}} \sum_{(j_s, j_{sa})} \sum_{j_{sa}=j_s+j_{sa}-1}^{n} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{is} - n_{sa} - j_{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} - 2 \cdot j_s - n_{sa} - j_{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{()} \sum_{(j_s=1)}^{()} \sum_{j_{sa}=j_s}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{()}$$

$$\frac{(2 \cdot n_i + j_s - n_{sa} - j_{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_i + 2 \cdot j_s - n_{sa} - j_{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

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$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_s^s \leq j_{sa}^s - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^s, \dots, j_{sa}^s\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-} \sum_{n_i=n}^n \sum_{n_{ik}=n}^{(j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(j_s+1)} \frac{(2 \cdot n_i + j_s - n_{sa} - j_{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j_{sa} - n - \mathbb{k} - j_{sa}^s) \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} + \sum_{k=l}^{(j_s)} \sum_{(j_s=1)} \sum_{j_{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}-j_{sa}^{ik}+1)}^{(j_s)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(2 \cdot n_i + j_s - n_{sa} - j_{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_i + 2 \cdot j_s - n_{sa} - j_{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s) \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D - n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa}^{ik} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge l_s = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\{j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \sum_{j_{sa}=j_s+j_{sa}-} \sum_{n_i=n_s}^n \sum_{n_{ik}=n_i+j_s-j_{sa}-j_{sa}^{ik}}^{(j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(j_s+1)} \frac{(2 \cdot n_i + j_s - n_{sa} - j_{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{is} + 2 \cdot j_s - n_{sa} - j_{sa} - n - \mathbb{k} - j_{sa}^s) \cdot (n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - j_{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!}{(D + j_{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} + \sum_{k=l}^{(j_s=1)} \sum_{j_{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{ik}=n_i+j_{sa}-j_{sa}-j_{sa}^{ik}+1}^{(j_s+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(2 \cdot n_i + j_s - n_{sa} - j_{sa} - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_i + 2 \cdot j_s - n_{sa} - j_{sa} - n - 2 \cdot \mathbb{k} - j_{sa}^s) \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z^{SDSD} \sum_{i=1}^{l_i} \sum_{j_s=j_s^s}^{l_i-k-s+1} \sum_{j_{sa}=j_{sa}+1}^{n} \sum_{n_i=n+\mathbb{k}}^{n} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(j_{sa}^{is} + 2 \cdot j_s + j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa}^s - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa}^{ik} - n_{ik} - n_{sa} - 2 \cdot j_{sa}^s - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} + \sum_{k=1}^{()} \sum_{j_s=1}^{()} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(3 \cdot n_i + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_i + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(D - l_i)}{(D + s - n - l_i)! (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n))$$

$$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^i, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_{zS}^{DSD}_{j_s, j^{sa}} = \sum_{k=1}^{l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_{sa}-k+1} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_i+j_{sa}-j_{sa}^{ik}}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-l_k)}^{()} \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot l_k)!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{1}{(n+j_s-j_s-s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-s)!}{(D+j^{sa}+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} + \sum_{k=1}^{()} \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}}^{()} \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-l_k)}^{()} \frac{(n_i+2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot l_k)!}{(3 \cdot n_i + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{1}{(n-s)!} \cdot \frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$$

$$s \geq s_0 \wedge (s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_s^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}, \mathbb{k}, j_{sa}, \dots, j_s^i\} \wedge$$

$$j_{sa}^s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i^l-1} \sum_{(j_s=j_{sa}-j_{sa}+1)}^{(\quad)} \sum_{j_{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik})}^{()} \\
 & \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot l_k)!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot l_k - j_{sa}^s)!} \cdot \\
 & \frac{(n - s - l_i - s)!}{(n - s - l_i - s)!} \cdot \\
 & \frac{(l_i - j_s - n - 1)! \cdot (j_s - 2)!}{(D - l_i)!} + \\
 & \frac{(D + s - n - l_i - j_{sa} - (n + j_{sa} - s))!}{(D + s - n - l_i - j_{sa} - (n + j_{sa} - s))!} + \\
 & \sum_{k=1}^l \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k} \\
 & \frac{(3 \cdot n_i + 2 \cdot j_s + j_{sa} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot l_k)!}{(3 \cdot n_i + 3 \cdot j_s + j_{sa} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot l_k - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
 \end{aligned}$$

- $((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$
- $(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\cdot)} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik}}^{(\cdot)} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\cdot)}$$

$$\frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - \mathbf{n} - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{(n + j_{sa} - j_s - s)!}{(n + j_{sa} - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} - \mathbf{n} - l_i)! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)} \sum_{j^{sa}=j_{sa}}^{(\cdot)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{(\cdot)}$$

$$\frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - \mathbf{n} - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n - s)!} \cdot \frac{(D - l_i)!}{(D + s - \mathbf{n} - l_i)! \cdot (n - s)!}$$

$$D \geq \mathbf{n} < n \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(k-s+2)} \sum_{j_{sa}=j_s+j_{sa}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j_{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\sum_{k=1}^{() l} \sum_{(j_s=1)}^{() l} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(\cdot)}{n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(3 \cdot n_i + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_i + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(D - l_i)}{(D + s - n - l_i)! (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n))$$

$$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i^{l-1} (l_s - k - j_{sa} + 2)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_i+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}-l_k)}^{(n_{sa}=n_{ik}+j_{sa}-l_k)} \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot l_k)!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{1}{(n+j_s-j_s-s)!} \cdot \frac{(l_s - k - j_s + 1)! \cdot (j_s - 2)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - s)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{i^l} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}} \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-l_k)}^{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-l_k)} \frac{(n_i + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot l_k)!}{(3 \cdot n_i + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{1}{(n-s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n-s)!}$$

$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge l_s = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_s^i\} \wedge$$

$$s \geq 3 \wedge (s = s) \vee$$

$$(D \geq n < n \wedge l_s = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_s^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_s^i\} \wedge$$

$$j_{sa}^s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j^{sa}=j_s+j_{sa}-1}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_{sa}^{ik}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{ik})}^{()} \\
 & \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot l_k)!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot l_k - j_{sa}^s)!} \cdot \\
 & \frac{(n - s - l_i - s)!}{(n - s - l_i - s)!} \cdot \\
 & \frac{(l_i - j_s - n - 1)! \cdot (j_s - 2)!}{(D - l_i)!} + \\
 & \frac{(D + s - n - l_i - j_{sa} - (n + j_{sa} - s))!}{(D + s - n - l_i - j_{sa} - (n + j_{sa} - s))!} + \\
 & \sum_{k=1}^l \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k} \\
 & \frac{(3 \cdot n_i + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot l_k)!}{(3 \cdot n_i + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot l_k - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
 \end{aligned}$$

- $((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$
- $j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$
- $(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$
- $1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}, \dots, j_{sa}\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z^{S^{DSD}}_{j_s, j^{sa}} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{sa}-j_{sa}^{ik})} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-\mathbb{k})} \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{(n + j_{sa} - j_s - s)!}{(n + j_{sa} - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} - n - l_i)! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{()} \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(3 \cdot n_{is} + 2 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - s - j_{sa}^{ik} - 2 \cdot \mathbb{k})!}{(3 \cdot n_{is} + 3 \cdot j_s + j_{sa} - n_{ik} - n_{sa} - 2 \cdot j^{sa} - n - j_{sa}^{ik} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{l-1} \binom{l-1}{k} \sum_{j_{sa}=j_{sa}+1}^{l_i+j_{sa}-k-s+1} \sum_{j_{sa}=j_{sa}+1}^{n} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(2 \cdot n_{ik} + j_{sa}^s + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j_{sa}^s + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=l}^{()} \sum_{j_s=1}^{()} \sum_{j_{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$l_i \leq D + s - n)) \wedge$

$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 1 \wedge (s = s) \vee$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge (s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{\binom{()}{j_s=j^{sa}-j_{sa}+1}} \sum_{l_{sa}=j_{sa}+1}^{l_{sa}-k+1}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{s+1})}^{()}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot l_k)!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{(n - s - l_i - s)!}{(n - s - l_i - k - 1)!} \cdot \frac{(l_i - j_s - n - 1)! \cdot (j_s - 2)!}{(D - l_i)!} + \frac{(D + s - n - l_i - j_{sa} - (n + j_{sa} - s))!}{(D + s - n - l_i - j_{sa} - (n + j_{sa} - s))!} + \sum_{k=i}^{()} \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot l_k)!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot l_k - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$(D \geq n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1))$$

$$f_z^{DSD}{}_{j_s, j^{sa}} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot lk)!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot lk - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - 1)! +}$$

$$\sum_{k=l_i}^{\binom{()}{j_s=l_i}} \sum_{a=j_{sa}}$$

$$\sum_{n_i=n+l_k}^{\binom{()}{n_i=n+l_k}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot lk)!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot lk - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$(D \geq n < n + 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \vee$$

$$(D \geq n < n + 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n + 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0) \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}^i\}$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^i, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$I = \mathbb{k} \Rightarrow$$

$$fz S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{()} \sum_{j^{sa}=j_{sa}+1}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}^{s+1})}^{()}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{(n - s - \mathbb{k})!}{(n - s - \mathbb{k} - 1)!} \cdot \frac{(l_s - j_s - n - 1)! \cdot (j_s - 2)!}{(D - l_i)!} + \frac{(D + s - n - l_i - j_{sa})!}{(n + j_{sa} - s)!}$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - \dots + 1 \wedge$$

$$1 \leq j_s < j^{sa} - j_{sa} - \dots \wedge$$

$$j_s + j_{sa} - \dots < j^{sa} \leq n + j_{sa} - s \wedge$$

$$- j^{ik} \dots = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$s \geq 3 \wedge s = s) \vee$

$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

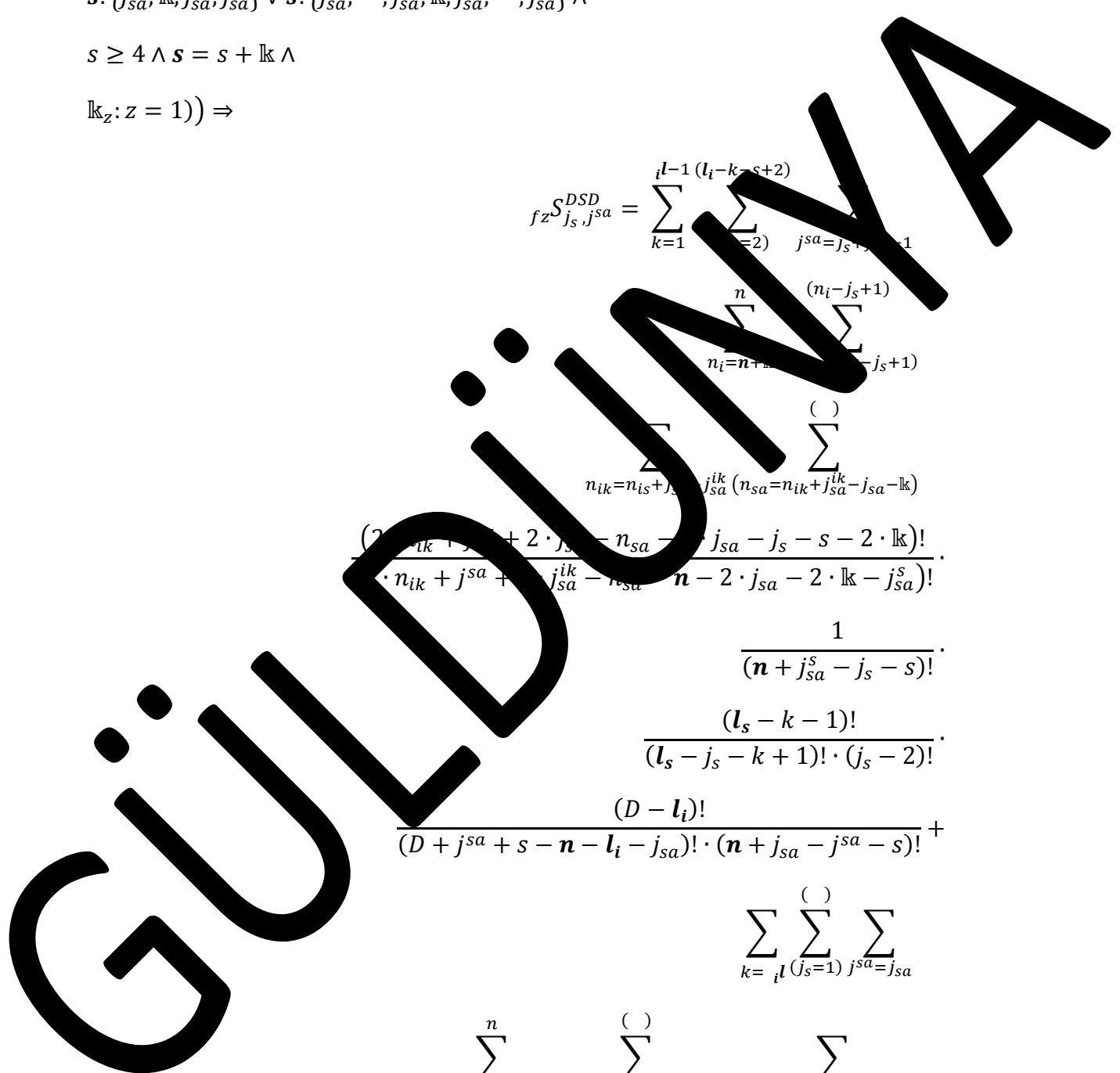
$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{i=2}^{(l-k-s+2)} \sum_{j_{sa}=j_s+1}^{n-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{j_{sa}=j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{()} \frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{()} \sum_{i=1}^{()} \sum_{j_{sa}=j_{sa}}^{()} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{ik}=n_i+j_{sa}-j_{sa}-j_{sa}^{ik}+1}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}^{()} \frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$



$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1, \dots, \mathbb{k} \Rightarrow$$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i^{l-1} (l_{sa} - k - j_{sa} + 2)} \sum_{(j_s=2)} \sum_{j^{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \dots)}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - \dots - s)!}$$

$$\sum_{l=1}^{()} \sum_{j_s=1}^{j^{sa}}$$

$$\sum_{n+\mathbb{k}}^n \sum_{(n_{ik}=\dots, n_{sa}=n_{ik}+j_{sa}-j_{sa}-\mathbb{k})}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + \dots - n_{sa} - \dots - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - \dots - n - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{l=1}^{()} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1) n_{sa} \dots}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_{sa}^{ik} - s - 2 \cdot l_k)!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot l_k - j_{sa}^{ik} - s)! \cdot (n - s)!}$$

$$(D + s - n - l_i) \cdot (n - s)!$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge \end{aligned}$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \wedge s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \sum_{j_{sa}=j_s+j_{sa}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{()}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_{sa} - j_s - s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - n - 2 \cdot j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - \dots + \dots)}$$

$$\sum_{k=1}^{n} \sum_{(j_s=1)}^{()} \sum_{j_{sa}=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_s - 2 \cdot \mathbb{k})!}{(2 \cdot n_{ik} + j^{sa} + 2 \cdot j_{sa}^{ik} - n_{sa} - 2 \cdot j_s - 2 \cdot \mathbb{k})! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1$

$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$

$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - 1$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge n_{ik} + j_{sa}^{ik} - j_{sa} = n_{ik} + j_{sa} - s = l_{sa} \wedge$

$(n_{ik} \geq n < n) \wedge \mathbb{k} = \dots$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$\{j_{sa}^s, \dots, j_{sa}^i\} \wedge$

$s \geq 2 \wedge s = s$

$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^s \leq j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 1)) \Rightarrow$

$$f_z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{l-1} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\cdot)} \sum_{j^{sa}=j_{sa}+1}^{l_i+j_{sa}-k-s+1} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{sa}^{s}-j_{sa}^{ik}}^{(\cdot)} \sum_{(n_{sa}=n_{ik}+j_{sa}-l_k)}^{(\cdot)}$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa} - s - j_s)!} \cdot \frac{(l_s - k)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)} \sum_{j^{sa}=j_{sa}}^{(\cdot)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-l_k}^{(\cdot)} \frac{(n_i + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot l_k)!}{(n_i + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot l_k - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n) \wedge l_s \leq D - n + 1 \wedge 1 \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq \mathbf{n} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - \mathbf{n})) \wedge$$

$$((D \geq \mathbf{n} < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge \mathbf{s} = s) \vee$$

$$(D \geq \mathbf{n} < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee \mathbf{s}: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{(\)} \sum_{(j_s=j^{sa}-j_{sa}+1)}^{(\)} \sum_{j_{sa}=j_{sa}+1}^{l_{sa}-k+1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}^{(\)}$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - \mathbf{n} - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot$$

$$\frac{1}{(\mathbf{n} + j_{sa}^s - s - j_s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_{sa} + s - \mathbf{n} - l_i - j_{sa})! \cdot (\mathbf{n} + j_{sa} - j_{sa}^s - s)!} +$$

$$\sum_{k=1}^n \sum_{i=1}^{(k)} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{(k)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}}$$

$$\frac{(n_i + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s) (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i - s)!}$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1) \Rightarrow$$

$$j_{sa}^{DSD} = \sum_{k=1}^{\mathbb{k}} \sum_{(j_s = \dots - j_{sa} + 1)} \sum_{j_{sa} = j_{sa} + 1}^{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^s - j_{sa}^{ik}} \sum_{(n_{sa} = n_{ik} + j_{sa}^{ik} - j_{sa} - \mathbb{k})}^{()} \frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=1}^{\mathbb{k}} \sum_{(j_s = 1)} \sum_{j_{sa} = j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(\cdot)}{n_{sa}=n_i+j_{sa}-j_{sa}^{ik}+1}} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}}$$

$$\frac{(n_i + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{sa} - j_{sa} + 1 > l_s \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j}^l = \sum_{k=1}^{i-1} \binom{()}{(j_s=j^{sa}-j_{sa}+1)} \sum_{j_{sa}=j_{sa}+1}^{l_s+j_{sa}-k}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \binom{()}{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot$$

$$\frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

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$$\sum_{k=1}^{i-1} \sum_{(j_s=1)}^{()} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j^{sa}-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_s}$$

$$\frac{(n_i + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s) (n - s)!} \frac{(D - l_i)!}{(D + s - n - j_{sa}^{ik} - j_s - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - j_s = l_{sa} \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: (j_{sa}^s = 1) \Rightarrow$$

$$f_Z S_{j_s, j^{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_i-k-s+2)} \sum_{j^{sa}=j_s+j_{sa}-1}^{(n_i-j_s+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik}} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}^{()}$$

$$\frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot lk)!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot lk - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - s - j_{sa}^s)}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - 1) +}$$

$$\sum_{k=i}^{()} \sum_{a=j_{sa}}$$

$$\sum_{n_i=n+lk} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{lk}-j_{sa}-lk}$$

$$\frac{(n_i + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot lk)!}{(n_i + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot lk - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$(D \geq n < n) \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa}^s + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s + j_{sa}^{lk} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n) \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa}^s + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{lk} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$((D \geq n < n \wedge l = lk = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$s_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i-1} \sum_{(j_s=z)}^{(l_{sa}-k-j_{sa}^s)} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_{is}+n)} \sum_{(n_{ik}=n_{is}+j_{sa}^s-j_{sa}^{ik})}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})} \frac{(n_{is}+n_{ik}+j_{sa}^{ik}-n_{sa}-s-j_{sa}-2 \cdot \mathbb{k})!}{(n_{is}+n_{ik}+j_{sa}^{ik}-n_{sa}-n-j_{sa}-2 \cdot \mathbb{k}-j_{sa}^s)!} \cdot \frac{1}{(n+j_{sa}^s-s-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_{sa}^s+s-n-l_i-j_{sa})! \cdot (n+j_{sa}-j_{sa}^s-s)!} + \sum_{k=1}^{(i)} \sum_{(j_s=1)}^{(j_s=j_{sa})} \sum_{j_{sa}^s=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1)}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k})}$$

$$\frac{(n_i + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa} + 1 \wedge$$

$$j_s + j_{sa} - 1 \leq j_{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

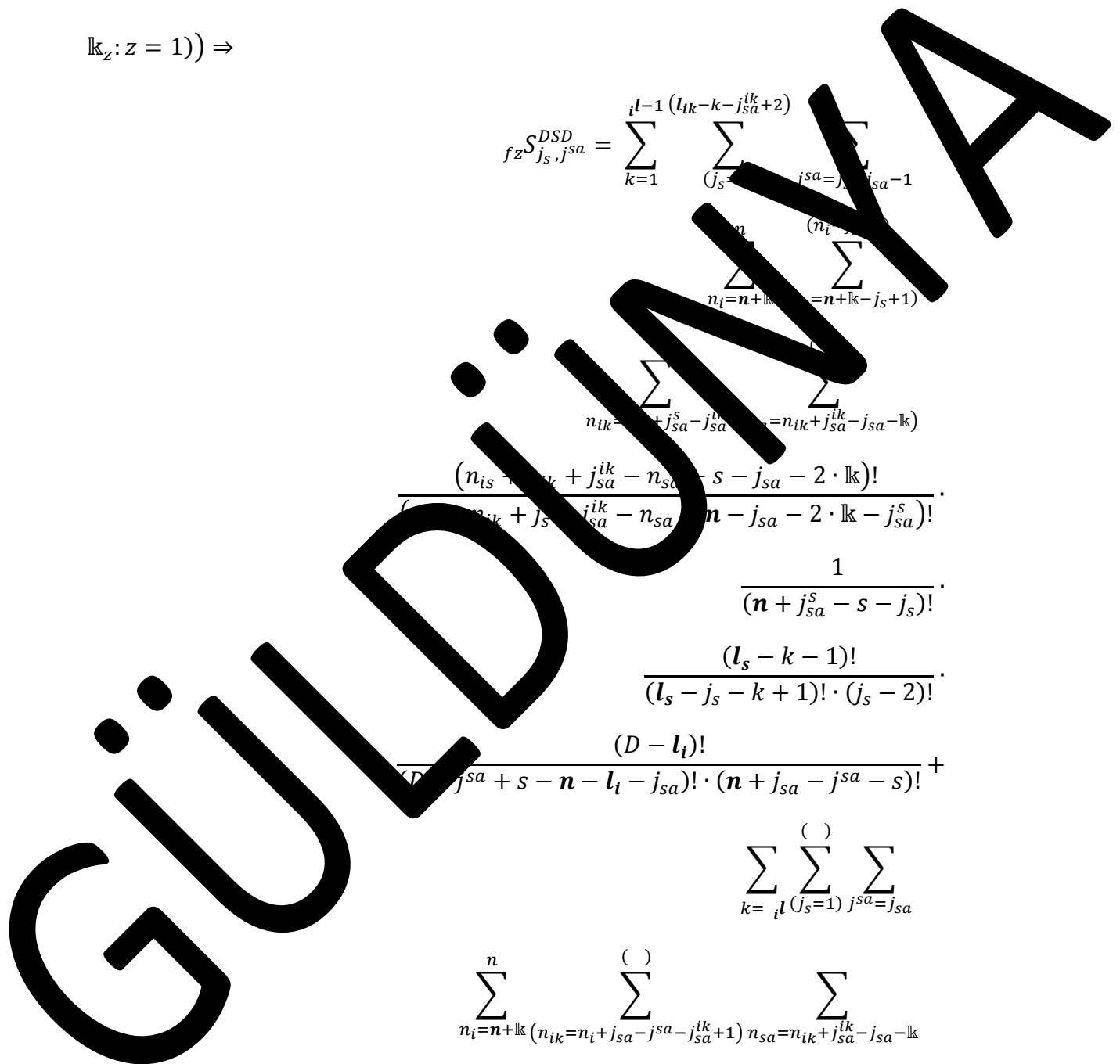
$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{i_l-1} \sum_{(j_s^k, j_{sa}^k)} \sum_{(n_i, n_{ik}, n_{sa})} \frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa}^s + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} + \sum_{k=1}^{i_l} \sum_{(j_s^k=1)}^{()} \sum_{j_{sa}^k=j_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^k-j_{sa}^{ik}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-\mathbb{k}} \frac{(n_i + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$



$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik}) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge \\ & l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n) \vee \end{aligned}$$

$$\begin{aligned} & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j^{sa} - j_{sa} + 1 \wedge \\ & j_s + j_{sa} - 1 \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge \\ & l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n)) \wedge \end{aligned}$$

$$((D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s) \vee$$

$$(D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s \leq j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}, j_{sa}, j_{sa}^i\} \vee s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 1)) \Rightarrow$$

$$fz S_{j_s, j_{sa}}^{DSD} = \sum_{k=1}^{l_i - (l_i - k + 1)} \sum_{(j_s=2, \dots, j_{sa}=j_s+j_{sa}-1)} \sum_{n_{is}+k}^{(n_{is}+1)} \sum_{n_{ik}+k}^{(n_{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)} \frac{(n_{is} + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - s - j_s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\sum_{k=1}^{(l_i)} \sum_{(j_s=1)}^{(l_i)} \sum_{j_{sa}^s=j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1)}^{(n_{ik}=n_i+j_{sa}-j_{sa}^{ik}+1)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k}^{(n_{sa}=n_{ik}+j_{sa}^{ik}-j_{sa}-k)}$$

$$\frac{(n_i + n_{ik} + j_{sa}^{ik} - n_{sa} - s - j_{sa} - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{sa}^{ik} - n_{sa} - n - j_{sa} - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

GÜLDÜNYA

DİZİN

B

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin son durumunun bulunabileceği olaylara göre

- simetrik olasılık, 2.3.1.1.1.1.1/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.1/3
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin 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 simetrisinin son durumunun bulunabileceği olaylara göre

- simetrik olasılık, 2.3.1.1.1.3.1/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.3.1/3
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu simetrisinin son durumunun bulunabileceği olaylara göre

- simetrik olasılık, 2.3.1.1.1.1.1/2
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.1/228
- toplam düzgün olmayan simetrik olasılık, 2.3.1.3.1.1.1/290

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu bağımsız simetrisinin 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 simetrisinin son durumunun bulunabileceği olaylara göre

- simetrik olasılık, 2.3.1.1.1.1.3.1/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.3.1/228
- 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 simetrisinin son durumunun bulunabileceği olaylara göre

- simetrik olasılık, 2.3.1.1.1.4.1.1/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.4.1.1/3

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 simetrisinin 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 simetrisinin 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 simetrisinin son durumunun bulunabileceği olaylara göre

- simetrik olasılık, 2.3.1.1.1.1.1/207
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.1.1/236

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 simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.1.3.1/4

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 simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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-bir bağımsız durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.6.1/4

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-bir bağımsız durumlu bağımsız simetrisinin 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-bir bağımsız durumlu bağımlı simetrisinin 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 simetrisinin 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 simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.7.2.1/5

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 simetrisinin 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 simetrisinin 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
simetrisinin 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
simetrisinin 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
simetrisinin 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 simetrisinin 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, 2.3.1.3.3.2.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımlı simetrisinin 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 simetrisinin
herhangi bir 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
simetrisinin 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
simetrisinin 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 simetrisinin 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

simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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 bağımsız-bağımlı durumlu simetrisinin 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 simetrisinin 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 simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.5.2.3.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.5.2.3.1/4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.2.3.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

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 simetrisinin 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 simetrisinin 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 simetrisinin 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, 2.3.1.2.6.1.2.1/3-4
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.1.2.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.1.1/4-5
 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 simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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 bağımsız simetrisinin 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 simetrisinin 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 simetrisinin 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

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 simetrisinin 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 simetrisinin 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 simetrisinin 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, 2.3.1.3.6.7.1.1/9

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

herhangi bir ve son duruma bağlı simetrik olasılık, 2.3.1.1.9.2.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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

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 simetrisinin 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 simetrisinin 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
 simetrisinin ilk herhangi bir ve son
 durumunun bulunabileceği olaylara göre
 herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.4.4.1/7-8
 toplam düzgün olmayan simetrik
 olasılık, 2.3.1.3.9.4.4.1/13

Bağımlı ve bir bağımsız olasılıklı farklı
 dizilimsiz bağımlı-bağımsız durumlu
 bağımsız simetrisinin 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 simetrisinin 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
 simetrisinin 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 simetrisinin 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 simetrisinin 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-bağımsız durumlu
 simetrisinin ilk herhangi bir 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
 simetrisinin 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
 simetrisinin 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
 simetrisinin ilk herhangi iki ve son
 durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.2.1.1/7

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 simetrisinin 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 simetrisinin 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 bağımlı simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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, 2.3.1.3.7.6.1.1/12

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre simetrik olasılık, 2.3.1.1.7.7.3.1/5

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 simetrisinin 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
simetrisinin 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
simetrisinin 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 bağımlı durumlu bağımsız
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.2.1.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.2.1.1/23

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin 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 bağımlı durumlu bağımlı
simetrisinin 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 durumlu bağımsız
simetrisinin 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 durumlu bağımsız
simetrisinin 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 durumlu bağımlı
simetrisinin 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 durumlu bağımsız
simetrisinin 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 durumlu bağımsız
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

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 simetrisinin 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
simetrisinin 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 simetrisinin 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 simetrisinin 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 simetrisinin 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
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı
simetrik olasılık,
2.3.1.1.11.2.1/16
toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.1.2.1/17

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı
simetrik olasılık,
2.3.1.1.11.3.1/16
toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.1.3.1/17

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
simetrisinin 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 simetrisinin 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 simetrisinin 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
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.4.1/16

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.4.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumda
bağımsız simetrisinin 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 durumda
bağımlı simetrisinin 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 durumda
simetrisinin 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 durumda
bağımsız simetrisinin 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 durumda
bağımlı simetrisinin 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 durumda
simetrisinin 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 durumda
bağımsız simetrisinin 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 durumda
bağımlı simetrisinin 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

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, simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılığın, tanım ve eşitliklerinden oluşmaktadır.

VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılık dağılımlarında, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarında, simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılığın, tanım ve eşitlikleri verilmektedir.

VDOİHİ'nin diğer ciltlerinde olduğu gibi bu ciltte de verilen ana eşitlikler, olasılık tablolarından elde edilen verilerle üretilmiştir. Diğer eşitlikler ise ana eşitliklerden teorik yöntemle üretilmiştir. Eşitlik ve tanımların üretilmesinde dış kaynak kullanılmamıştır.

GÜLDÜNKYA