

VDOIHI

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

Cilt 2.3.2.3.7.1.1.660

İsmail YILMAZ

**Matematik / İstatistik / Olasılık**

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**VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre ilk düzgün olmayan simetrik olasılık Cilt 2.3.2.3.7.1.1.660**

*İsmail YILMAZ*

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## **KÜTÜPHANE BİLGİLERİ**

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*1. Bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre ilk düzgün olmayan simetrik olasılık*

*Dili: Türkçe + Matematik Mantık*



*K. Atatürk*

Türkiye Cumhuriyeti Devleti  
Kuruluşunun  
100. Yılı Anısına

## DÜZELTME

Bu cilt için

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

simgesi yerine

$fz^{ISO}_{j_s, j_{ik}, j^{sa}, j_i}$

simgesi olmalı.



## 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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- ✓ Bilgi merkezli değerlendirme yöntemidir.

*Sanırım bilgi ve teknolojideki kaderimiz veriyle ilişkilendirilmiş.*

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**GÜLDÜNYA**

## Simge ve Kısaltmalar

$n$ : olay sayısı

$n$ : bağımlı olay sayısı

$m$ : bağımsız olay sayısı

$l$ : bağımsız durum sayısı

$L$ : simetrimin bağımsız durum sayısı

$l$ : simetrimin bağımlı durumlarından önce bulunan bağımsız durum sayısı

$L$ : simetrimin bağımlı durumlarından sonra bulunan bağımsız durum sayısı

$k$ : simetrimin 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

$l$ : simetrimin ilk bağımlı durumunun, bağımlı olasılık farklı dizilimsiz dağılımın son olayı için sırası. Simetrimin sonuncu bağımlı olayındaki durumun, bağımlı olasılık farklı dizilimsiz dağılımlardaki sırası

$l_i$ : simetrimin son bağımlı durumunun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası. Simetrimin birinci bağımlı olayındaki durumun, bağımlı olasılık farklı dizilimsiz dağılımlardaki sırası

$l_s$ : simetrimin ilk bağımlı durumunun, bağımlı olasılıklı farklı dizilimsiz

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

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

$l_{sa}$ : simetrimin aranacağı bağımlı durumunun, bağımlı olasılıklı farklı dizilimsiz dağılımlardaki sırası. Simetrimin aranacağı bağımlı olayındaki durumun, bağımlı olasılık farklı dizilimsiz dağılımlardaki sırası

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

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

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

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

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

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

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

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

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

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

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

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

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

$f_{Z,0} S_{j_s,j_i,0}^{iS}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı

durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre ilk simetrik olasılık

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

${}^0 S_{j_s,j_i}^{iS}$ : 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 ilk simetrik olasılık

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

${}^0 f_Z S_{j_s,j_i,D}^{iS}$ : 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 ilk simetrik olasılık

$f_Z S_{j_s,j^{sa}}^{iS}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre ilk simetrik olasılık

$f_Z S_{j_s,j^{sa},0}^{iS}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk ve herhangi bir

durumunun bulunabileceği olaylara göre ilk simetrik olasılık

$fzS_{j_s, j^{sa}, D}^{iS}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk ve herhangi bir durumunun bulunabileceği olaylara göre ilk simetrik olasılık

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$fzS_{j_{ik}, j^{sa}}^{iS}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin herhangi iki durumuna bağlı ilk simetrik olasılık

$fzS_{j_{ik}, j^{sa}, 0}^{iS}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin herhangi iki durumuna bağlı ilk simetrik olasılık

$fzS_{j_{ik}, j^{sa}, D}^{iS}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin herhangi iki durumuna bağlı ilk simetrik olasılık

$fzS_{j_{ik}, j_i}^{iS}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin her durumunun bulunabileceği olaylara göre ilk simetrik olasılık

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durumunun bulunabileceği olaylara göre ilk simetrik olasılık

$f_{z,0}S_{j_s,j_{ik},j^{sa},0}^{is}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre ilk simetrik olasılık

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$fz \overset{ISO}{\Rightarrow} j_s, j_{ik}, j^{sa}, j_i, 0$ : 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 ilk düzgün olmayan simetrik olasılık

$fz \overset{ISO}{\Rightarrow} j_s, j_{ik}, j^{sa}, j_i, D$ : 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 ilk düzgün olmayan simetrik olasılık

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herhangi iki ve son durumuna bağlı ilk düzgün olmayan simetrik olasılık

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bağımsız veya bağımlı-bağımsız veya bağımsız-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı ilk 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 yüze 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 dizilimsiz dağılımlar, dağılımın ilk durumuyla başlayan (bunun yerine farklı dizilimsiz dağılımlarda simetrisinin ilk durumuyla başlayan dağılımlar), dağılımın ilk durumu hariçinde dağılımın herhangi bir durumuyla başlayan dağılımlar (bunun yerine farklı dizilimsiz dağılımlarda simetride bulunmayan bir durumla başlayan dağılımlar) ve dağılımın ilk durumu hariçinde ilk dağılımının başladığı farklı ikinci durumla başlayıp simetrisinin ilk durumuyla başlayan dağılımların sonuna kadar olan dağılımlarda (bunun yerine farklı dizilimsiz 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. Farklı dizilimsiz dağılımlarda, 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 tanım 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 ve Çift Çıkartma ile çıkarılan eşitliklerle birleştirilerek, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımların yeni eşitlikleri elde edilecektir. Eşitlikleri adlandırılmasında bağımlı olasılıklı farklı dizilimsiz dağılımlarda kullanılan adlandırmalar kullanılacaktır. Bu adlandırma 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/bağımsız-bağımsız/bağımsız-bağımsız” 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 dağılımlardaki sırasına göre verilen eşitliklerdeki toplam ve sınırlı 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 dağılımlardan, bağımsız olasılıklı durumla başlayıp ilk bağımlı durumu bağımlı olasılıklı dağılımın ilk bağımlı durumu bağımlı olasılıklı dağılımın ilk bağımlı durumuyla başlayan dağılımlarda, simetrinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre ilk düzgün olmayan simetrik olasılığın eşitlikleri verilmektedir.

**SİMETRİDEN SEÇİLEN DÖRT DURUMA GÖRE İLK DÜZDÜN OLMAYAN SİMETRİK OLASILIK**

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}}^{(i)} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \sum_{k=j_{sa}+l_{ik}-l_{sa}}^{(j_i+j_{sa}-s)} \sum_{(j_{sa}=l_{sa}+n-D)}^{n} \sum_{j_i=l_i+n-D}^{n} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

GÜLDÜZÜNÜYA

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^n (j_s = j_{ik} + l_s - k)$$

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

$$\sum_{n=n+k}^n \sum_{(n_{is} = n + j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^n \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

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

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

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

$$\sum_{(n_{ik}=n-k_2+k_3-j_{ik}+1)}^{(n_{ik}=n-k_2+k_3-j_{ik}+1)}$$

$$\sum_{(n_{ik}=n-k_2+k_3-j_{ik}+1)}^{(n_{ik}=n-k_2+k_3-j_{ik}+1)}$$

$$\sum_{(n_s=n-k_3-j_i+1)}^{(n_s=n-k_3-j_i+1)}$$

$$\sum_{(n_s=n-k_3-j_i+1)}^{(n_s=n-k_3-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\begin{aligned}
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)} \sum_{j_i=l_i+n-D}^{(n)} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{ik}} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n)} \sum_{n_s=n_{sa}+j_{sa}-j_i-k_3} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_s)!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - j_s)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - 1)! \cdot (j_s - 2)!} \\
& \frac{(D - j_s + 1)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

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

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

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

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

$$D \geq n < n \wedge I = j_s - 1 \geq 0 \wedge$$

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

$$s: \{k_1, j_{sa}^{ik}, k_2, j_s, k_3, j_{sa}^i\}$$

$$k_1 = 4 \wedge k_2 = s + k \wedge$$

$$k_z: z = 3 \wedge k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned}
f_z S_{j_s, j_{ik}, j_{sa}, j_i} &= \sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(n)} \\
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j_i+j_{sa}-s)} \sum_{j_i=l_i+n-D}^n
\end{aligned}$$



$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = n + k - j_s + 1)}} \sum_{\substack{n_{i_s} + j_s - j_{ik} - k_1 \\ n_{ik} = n + k_2 + k_3 - j_{ik} + 1}} \\
 & \sum_{\substack{(n_{ik} + j_{ik} - j^{sa} - k_2) \\ (n_{sa} = n + k_3 - j^{sa} + 1)}} \sum_{\substack{n_{sa} + j^{sa} - j_i - k_3 \\ n_s = n - j_i + 1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j_i + j_s - 1)! \cdot (n_{sa} + j_i - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa})! \cdot (l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \\
 & \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = j_i + j_{sa} - s)} \sum_{j_i = l_i + n - D}^{\binom{D}{j_s}} \\
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = n + k - j_s + 1)}} \sum_{n_{ik} = n_{i_s} + j_s - j_{ik} - k_1} \\
 & \sum_{\substack{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2) \\ (n_s = n_{sa} + j^{sa} - j_i - k_3)}}
 \end{aligned}$$

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$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

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

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s) \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_s)!} \cdot \\
 & \frac{(n - l_i)!}{(n - j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \sum_{s=1}^n \sum_{(j_s = j_{ik} + l_s - l_{ik})} \\
 & \frac{(n_{is} - j_s - 1)!}{(j_s - 2)! \cdot (n_{is} - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{(j_s - j_i)} \sum_{l_s = l_{ik}}^{(l_s - l_{ik})} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(n + j_{sa} - s)} \sum_{j_i = j^{sa} + s - j_{sa}}^{(j_s - j_{sa})} \\
& \sum_{n_i = n + j_{sa} - j_{sa} - l_{sa} - l_{ik} - 1}^n \sum_{n_s = n + l_{sa} - l_{sa} - l_{ik} - 1}^{j_s} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - l_{k1}}^{(j_s - j_{sa})} \\
& \sum_{n_{sa} = n_{ik} + j_{ik} - l_{sa} - l_{k2}}^{(j_s - j_{sa})} \sum_{n_s = n_{sa} + j^{sa} - j_i - l_{k3}}^{(j_s - j_{sa})} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

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

$$2 \leq j_s \leq j_{ik} - l_{k1} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - l_{k1} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

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

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

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

$$s: \{j_{sa}^s, l_{k1}, j_{sa}^{ik}, l_{k2}, j_{sa}, l_{k3}, j_{sa}^i\} \wedge$$

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

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

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

$$\sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}-k_1}^{n_{is}+j_{ik}-k_1} \sum_{j_{ik}+1}^{n_{ik}+k_1}$$

$$\sum_{j_{ik}+j_{ik}-k_2}^{(n_{ik}+j_{ik}-k_2)} \sum_{j^{sa}+1}^{n_{sa}+j^{sa}-k_3} \sum_{j_i=n-j_i+1}^{j^{sa}+1}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{\binom{()}{(n+j_{sa}-s)}} \sum_{j_i=j^{sa}+s-j_{sa}}^{\binom{()}{n}}$$

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$$\begin{aligned}
& \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_k+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
& \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
& \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
& \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
& \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
& \frac{(n_{s_a} - 1)!}{(j_i + j^{s_a} - 1)! \cdot (n_{s_a} + j^{s_a} - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(j_i + j_i - n_s + 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} - l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{\binom{D}{j_s}}$$

$$\sum_{j_{i_k}=j^{s_a}+l_{i_k}-l_{s_a}}^{(n+j_{s_a}-s)} \sum_{(j^{s_a}=l_i+n+j_{s_a}-D-s)}^{(n+j_{s_a}-s)} \sum_{j_i=j^{s_a}+s-j_{s_a}}^{(n+j_{s_a}-s)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-l_{k_1}}^{(n_i-j_s+1)}$$

$$\sum_{(n_{s_a}=n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})}^{\binom{D}{j_s}} \sum_{n_s=n_{s_a}+j^{s_a}-j_i-l_{k_3}}^{\binom{D}{j_s}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

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

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_i + j_{sa} - l_s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_s)!}$$

$$\frac{(n - l_i)!}{(n - j_i - 1)! \cdot (n - j_i)!}$$

$$\sum_{s=1}^n \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{(j^{sa} = l_i + j_{sa} - D - s)} \sum_{j_i = j^{sa} + s - j_{sa}}$$

$$\sum_{(n_i - j_s + 1)} \sum_{n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)} \sum_{n_s = n - j_i + 1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$



$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{(j_s - j_i)} \sum_{l_s - l_{ik}}^{(j_s - j_i)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(n + j_{sa} - s)} \sum_{j_i = j^{sa} + s - j_{sa}}^{(j_s - j_i)} \sum_{n_i = n + j_{sa} - j_{sa} - l_{ik}}^{n} \sum_{j_s}^{j_s} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - l_{k1}}^{j_s} \sum_{j_{sa} = n_{ik} + j_{ik} - l_{k2}}^{j_s} \sum_{n_s = n_{sa} + j^{sa} - j_i - l_{k3}}^{j_s} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$\mathbb{k}_Z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

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

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

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}-\mathbb{k}_1}^{n_{is}+j_{ik}-\mathbb{k}_1} \sum_{j_{ik}+1}^{j_{ik}+1}$$

$$\sum_{j^{sa}+1}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{=n-j_i+1}^{n_{sa}+j^{sa}-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is})}{(j_s - 2) \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1) \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(\ )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\ )}$$

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$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{n+j_{sa}^{ik}-s} \binom{(\quad)}{\quad} \sum_{j_i=j_{sa}+s-j_{sa}}^n$$

$$\sum_{n_i=n+l_k}^n \binom{(n_i-j_s+1)}{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)!(n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_{sa}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!}$$

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

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})!(j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!}$$

$$\sum_{k=1}^{\quad} \binom{(\quad)}{\quad} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{n+j_{sa}^{ik}-s} \binom{(\quad)}{\quad} \sum_{j_i=j_{sa}+s-j_{sa}}^n$$

$$\sum_{n_i=n+l_k}^n \binom{(n_i-j_s+1)}{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} (n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^{ik}\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

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

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

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - j_s - s)! \cdot (j_i + l_i - j^{sa} - s)!} \cdot \\
& \frac{(D - j_i - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=1}^n \sum_{(j_s = j_{ik} + l_s - l_s)}^{( )} \\
& \sum_{j_{ik} = l_i}^{n + j_{sa} - s} \sum_{j_{sa} = D - s}^{( )} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_s)}^{( )} \sum_{j_i = j^{sa} + s - j_{sa}}^n \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}^{n_{is} + j_s - j_{ik} - k_1} \\
& \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{(n_s = n - j_i + 1)}^{n_{sa} + j^{sa} - j_i - k_3} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
\end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{\infty} (j_s = j_{ik} + l_s)$$

$$\sum_{i_{ik}=l_i+n+j_s}^{n+j_{sa}^{ik}-s} \binom{D-s}{j^{sa}+l_{sa}-l_{ik}} \binom{D-s-j_{sa}}{j_i-j_s}$$

$$\sum_{k_1=0}^n \binom{n-i-j_s+1}{n+k_1} \binom{n-i-j_s+1}{n_{is}=n+j_s+1} \sum_{k_2=0}^{\infty} \sum_{k_3=0}^{\infty} \binom{n_{ik}=n_{is}+j_s-j_{ik}-k_1}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2} \binom{n_s=n_{sa}+j^{sa}-j_i-k_3}{n_s=n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i + j_{sa} + j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

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

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

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

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

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}}$$

$$\sum_{(n_{ik}-j_{sa}-\mathbb{k}_z)}^{(n_{ik}-j_{sa}-\mathbb{k}_z)} \sum_{n_s=n-j_i+1}^{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{n+j_{sa}^{ik}-s} \binom{(\quad)}{\sum_{j_{sa}=j_{ik}+l_{sa}-l_{ik}} \sum_{j_i=j_{sa}+s-j_{sa}}^n} \\
 & \sum_{n_i=n+l_k}^n \binom{(n_i-j_s+1)}{\sum_{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$\sum_{k=1} \binom{(\quad)}{\sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{n+j_{sa}^{ik}-s} \binom{(\quad)}{\sum_{j_{sa}=j_{ik}+l_{sa}-l_{ik}} \sum_{j_i=j_{sa}+s-j_{sa}}^n} \\
 & \sum_{n_i=n+l_k}^n \binom{(n_i-j_s+1)}{\sum_{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$



$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_s)! \cdot (n - j_i)!}}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^{ik}\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

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

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - l_s - s)! \cdot (j_i + l_i - j^{sa} - s)!} \cdot \\
& \frac{(D - j_i - n + l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)} \\
& \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n-s+1)} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(n-s+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{n-s+1} \\
& \sum_{n_i=n+l_k}^{n-s+1} \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
& \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
\end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\binom{n-1}{j_s=l_i+n-D-1}$$

$$\sum_{j_{ik}=j_{ik}-l_s} \binom{()}{j_{ik}+l_{sa}-l_{ik}} \sum_{j_{sa}=j_{sa}-j_{sa}}$$

$$\sum_{i=n+l_k}^n \binom{(n_i-j_s+1)}{(n_{is}=n+l_s+j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2}} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{\binom{(n_i + j_{sa} + j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S j_s, j_{ik}, j_{sa}, j_i = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_i+n-D-s)} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(j_s+l_{ik}-l_s)} \sum_{(j_{sa}=j_{ik}-l_s)}^{(j_s+l_{ik}-l_s)} \sum_{j_i=n-D}^{(j_s+l_{ik}-l_s)} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_i-j_s+1)} \sum_{(n_{ik}-j_{sa}-\mathbb{k}_2)}^{(n_i-j_s+1)} \sum_{(n_s=n-j_i+1)}^{(n_i-j_s+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \binom{()}{j_{ik}+l_{sa}-l_{ik}} \sum_{j_i=j^{sa}+s-j_{sa}} \binom{n}{j_i}$$

$$\sum_{n_i=n+l_k} \binom{n_i-j_s+1}{n_{is}=n+l_k-j_s+1} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1} \binom{n_{is}+j_s-j_{ik}-l_{k_1}}{n_{ik}+j_{ik}-j^{sa}-l_{k_2}}$$

$$\sum_{n_{sa}=n+l_{k_3}-j^{sa}+1} \binom{n_{sa}+j^{sa}-j_i}{n_{sa}-j_i+1}$$

$$\frac{(n_i - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s + 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

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

$$\sum_{k=1} \binom{n-s+1}{j_s=l_i+n-D-s+1}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \binom{()}{j_{ik}+l_{sa}-l_{ik}} \sum_{j_i=j^{sa}+s-j_{sa}} \binom{n}{j_i}$$

$$\sum_{n_i=n+l_k} \binom{n_i-j_s+1}{n_{is}=n+l_k-j_s+1} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \binom{n_i-j_s+1}{n_{ik}+j_{ik}-j^{sa}-l_{k_2}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

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

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f^z \mathcal{S}_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - l_s - s)! \cdot (j_i + l_i - j^{sa} - s)!} \cdot \\
& \frac{(D - j_i - l_i - n + l_i)!}{(D + j_i - l_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)} \\
& \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n)} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(n)} \sum_{j_i=j^{sa}+s-j_{sa}}^{n} \\
& \sum_{n_i=n+k}^{n} \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
& \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
\end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$(n - 1)$$

$$(j_s = l_i + n - D - 1)$$

$$\sum_{j_{ik}=j_i - l_{ik} - l_s} \sum_{j_{sa}=j_i + l_{sa} - l_{ik}} \sum_{j_s=j_s - j_{sa}}$$

$$\sum_{i=n+l_k}^n \sum_{(n_i=n+l_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{sa} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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



$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\binom{()}{j_s=j_{ik}+l_s-l_i}} \sum_{j_{sa}+j_{sa}^{ik}-j_{sa}}^{\binom{()}{j_{ik}=l_{ik}+n-D} (j_{sa}=j_{sa}^{ik}-l_i) j_i=n-D} \sum_{n_i=n+\mathbb{k}}^{\binom{()}{n_i=n+\mathbb{k}}} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{\binom{()}{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \sum_{n_s=n-j_i+1}^{\binom{()}{n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D}{j_s}} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{\binom{D}{j_s}} \sum_{(j^{sa}=j_i+l_i-l_{sa})}^{\binom{D}{j_s}} \sum_{j_i=l_i+n-p}^{\binom{D}{j_s}} \sum_{n_i=n+l_k}^{\binom{D}{j_s}} \sum_{(n_{is}=n+l_k-j_s+1)}^{\binom{D}{j_s}} \sum_{n_{ik}=n_{is}-j_{ik}-l_{k_1}}^{\binom{D}{j_s}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{\binom{D}{j_s}} \sum_{n_s=n_{sa}+j^{sa}-j_i}^{\binom{D}{j_s}} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - l_{k_2} - l_{k_1} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n_{ik} + j_{sa}^{ik} - j_{sa}^{ik} - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

$l_{k_1} - j_{sa}^{ik} + 1 \leq l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge l = l_{k_1} = 0 \wedge$

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

$s: \{j_s^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, l_{k_3}, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s + l_{k_1} \wedge$

$l_{k_1}; z = 3, l_{k_1} = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D}{j_s}}$$

$$\begin{aligned}
& \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_i+n-D}^n \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
& \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
& \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \\
& \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
& \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
& \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
& \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
& \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
& \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot
\end{aligned}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\begin{aligned}
& \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{( )} \sum_{(j^{sa}=j_i+l_i-l_{sa})}^{( )} \sum_{j_i=l_i+n-D}^n \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}
\end{aligned}$$

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}}{\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^{ik}\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{(\quad)}{\quad}$$

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

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \\
& \sum_{j_{ik} = j^{sa} + l_i - j_{sa}}^{(n + j_{sa} - s)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + l_i - l_{sa}} \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \\
& \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{( )} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^s = \sum_{j_{ik}=l_s}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{j_{sa}^{ik}=j_{sa}-D-1}^{j_{sa}^{ik}-1} (j^{sa} = n + j_{sa} - D - s) \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(n+j_{sa}-s)} \sum_{n+\mathbb{k}}^{(n_i-j_s)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \sum_{n_s=n-j_i+1}^{(n_i-n_{is}-1)!} \cdot \frac{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!}$$

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

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

$$\sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_s-j_s-j_{ik}-l_{k_1}}^{(n_i-j_s+1)}$$

$$\sum_{(n_{sa}=n_{ik}+j_{sa}-l_{k_2})}^{\binom{D}{j_{sa}=n_{sa}-j_{sa}-l_{k_2}}} \sum_{(n_{sa}=n_{ik}+j_{sa}-l_{k_2})}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{sa}-l_{k_2})}^{(n_i-j_s+1)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{sa} + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

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

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

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

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

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j_i+1)}^{n_{sa}+j_s-j_i-k_3} \sum_{n_s=n-j_i}^{n_{sa}+j_s-j_i-k_3}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{ik} + j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} + n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j^{sa} - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_s)}$$

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

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$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbf{l}_k}^{\mathbf{n}} \sum_{(n_{i_s}=\mathbf{n}+\mathbf{l}_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=\mathbf{n}+\mathbf{l}_k_2+\mathbf{l}_k_3-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-\mathbf{l}_k_1} \\
& \sum_{(n_{s_a}=\mathbf{n}+\mathbf{l}_k_3-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-\mathbf{l}_k_2)} \sum_{n_s=\mathbf{n}-j_i+1}^{n_{s_a}+j^{s_a}-j_i-\mathbf{l}_k_3} \\
& \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
& \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
& \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
& \frac{(n_{s_a} - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{s_a} + j_i - j_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})! \cdot (j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\sum_{k=1}^{\binom{()}{j_s=j_{i_k}+l_s-l_{i_k}}} \sum_{\binom{()}{j_s=j_{i_k}+l_s-l_{i_k}}}$$

$$\sum_{j_{i_k}=l_i+\mathbf{n}+j_{s_a}^{i_k}-D-s}^{\mathbf{n}+j_{s_a}^{i_k}-s} \sum_{(j^{s_a}=j_{i_k}+j_{s_a}-j_{s_a}^{i_k})}^{\binom{()}{j^{s_a}=j_{i_k}+j_{s_a}-j_{s_a}^{i_k}}} \sum_{j_i=j^{s_a}+l_i-l_{s_a}}$$

$$\sum_{n_i=\mathbf{n}+\mathbf{l}_k}^{\mathbf{n}} \sum_{(n_{i_s}=\mathbf{n}+\mathbf{l}_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=\mathbf{n}_{i_s}+j_s-j_{i_k}-\mathbf{l}_k_1}$$

$$\sum_{(n_{s_a}=\mathbf{n}_{i_k}+j_{i_k}-j^{s_a}-\mathbf{l}_k_2)}^{\binom{()}{n_{s_a}=\mathbf{n}_{i_k}+j_{i_k}-j^{s_a}-\mathbf{l}_k_2}} \sum_{n_s=\mathbf{n}_{s_a}+j^{s_a}-j_i-\mathbf{l}_k_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )}$$

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

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{ik} - j_{sa}^{ik})!}$$

$$\frac{(n - l_i)!}{(n - j_i) \cdot (n - j_i)!}$$

$$\sum_{j_s=1}^{n-l_i} \sum_{j_s=j_{ik}+l_s-l_{ik}}$$

$$\sum_{j_{ik}=1}^{n+l_{sa}-j_{sa}^{ik}-s} \sum_{j_{sa}^{ik}=1}^{n+l_{sa}-j_{sa}^{ik}-s} \sum_{j_{ik}+j_{sa}^{ik}-j_{sa}^{ik}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n+l_{ik}}^{n+l_{ik}} \sum_{(n_{is}=n+l_{ik}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{ik_2}+l_{ik_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D}^{n+j_{sa}^{ik}-s} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa})} \sum_{(j_i=j_{sa}+l_i-l_{sa})}$$

$$\sum_{n_i=n+l_k} \sum_{(n_i=n+l_k-j_s)} \sum_{(n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1})}$$

$$\sum_{(n_i=n_{ik}+j_{ik}-l_{k_2})} \sum_{(n_s=n_{sa}+j_{sa}-j_i-l_{k_3})}$$

$$\frac{(n_i + j_{ik} + j_{sa} + j_{sa}^{ik} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n + l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j_{sa}^{ik} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

$$D \geq n < n \wedge I = l_k \geq 0 \wedge$$

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

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + l_k \wedge$$

$$\mathbb{k}_Z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

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

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_s}^{(n+j_{sa}-s)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+\mathbb{k}-j_{ik}+\mathbb{k}_1}^{(n_i-j_s+1)}$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(n_{sa}+j^{sa}-\mathbb{k}_3)}^{(n_{sa}+j^{sa}-\mathbb{k}_3)}$$

$$\sum_{(j^{sa}+1)}^{(j^{sa}+1)} \sum_{(n-j_i+1)}^{(n-j_i+1)}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(n_{sa} - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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

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$$\begin{aligned}
& \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{\substack{(n+j_{sa}-s) \\ (j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}} \sum_{j_i=j_{sa}+l_i-l_{sa}} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
& \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
& \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
& \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
& \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)!(n_{is}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\
& \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
& \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
& \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
& \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
& \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot
\end{aligned}$$

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

$$\begin{aligned}
& \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{\substack{(\quad) \\ (j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}} \sum_{j_i=j_{sa}+l_i-l_{sa}} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
\end{aligned}$$

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_s)! \cdot (n - j_i)!}}$$

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

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

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

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

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

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

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

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

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - l_s)!}{(j_{ik} + l_{sa} - j^{sa} - l_s - l_{ik} - l_s)! \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)} \\
& \sum_{j_{ik}=j^{sa}+l_i-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+l_i-l_s} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
& \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
\end{aligned}$$



$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_s=l_i+n-D-s}^{(n-s)}$$

$$\sum_{j_{ik}=j_s}^{(n-s)} \sum_{j_{sa}=l_s}^{(n-s)} \sum_{j_{sa}^{ik}=j_{sa}-j_{sa}^{ik}}^{(n-s)} \sum_{j_i=l_i-l_{sa}}^{(n-s)}$$

$$\sum_{n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n-s+1)} \sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-l_{k_1}}^{(n-s+1)}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2}}^{(n-s)} \sum_{n_s=n_{sa}+j_{sa}-j_i-l_{k_3}}^{(n-s)}$$

$$\frac{(n_i + j_{sa} + j_{sa}^{ik} - j_{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j_{sa}^{ik} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\binom{()}{j_s=j_{ik}+l_s-l_i}} \sum_{j_{ik}=l_{ik}+n-D}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{j_{sa}=j_i+l_{sa}-l_i}^{\binom{()}{j_{sa}=j_i+l_{sa}-l_i}} \sum_{n_i=n+k}^n \sum_{n_{is}=n-j_s+1}^{n_i+j_s-j_{ik}} \sum_{n_{ik}=k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}} \sum_{n_s=n-j_i+1}^{n_{ik}-j_{sa}-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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$$\sum_{k=1}^{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{\binom{()}{j_{sa}=j_i+l_{sa}-l_i}} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^n$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}^{\binom{()}{j_{ik}=l_{sa}+n+s-D-j_{sa}}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2)}^{\binom{()}{j_{sa}=j_i+l_{sa}-l_i}} \sum_{(n_s=n_{sa}+j_{sa}-j_i)}^{\binom{()}{j_{sa}=j_i+l_{sa}-l_i}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n_{ik} + j_{sa} - j_{sa} - k_2 - k_3 - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{sa}^{ik} < j_i + j_{sa} - s \wedge n_{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

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

$$D \geq n < n \wedge I = k_1 = 0 \wedge$$

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

$$s: \{j_s^s, k_1, j_{sa}^{ik}, k_2, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k; z = 3, k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{\binom{()}{j_{sa}=j_i+l_{sa}-l_i}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+n+j_{sa}^{lk}-D-1}^{j^{sa}+j_{sa}^{lk}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)!(j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!} \cdot \sum_{k=1}^{\sum} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} (n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})! \cdot (n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_s)! \cdot (n - j_i)!}$$

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

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

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

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

$$D \geq n < n \wedge I = k \geq 0 \wedge$$

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

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^{ik}\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

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

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

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(l_s - j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - j_{sa})! \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)} \\
& \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(n + j_{sa} - s)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + l_i - l_{sa}} \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \\
& \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{(\cdot)} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

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

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

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

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

$$D \geq n < n \wedge I = k \geq 0 \wedge$$

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

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} & f_z^{(j_s)} = \sum_{j_s=2}^{j_s} \sum_{j_{ik}=j_s+1}^{j_s+j_{sa}^{ik}-1} \sum_{j_{sa}=j_{ik}-j_{sa}^{ik}+1}^{j_{ik}-j_{sa}^{ik}+1} \sum_{j_i=j_{sa}+l_i-l_{sa}}^{j_{sa}+j_{sa}^{ik}-s} \sum_{l_s=n+k-j_s+1}^{n+k-j_s+1} \sum_{l_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{l_{sa}=n+k_3-j_{sa}+1}^{n_{sa}+j_{sa}-j_i-k_3} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \end{aligned}$$

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$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\ )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

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

$$\sum_{n_i = n + l_k}^n \sum_{(n_i - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + j_s - j_{ik} - l_{k_1})}$$

$$\sum_{(n_{sa} = n_{ik} + j_{sa} - l_{k_2})}^{(\ )} \sum_{(n_{sa} = n_{sa} + j_{sa} - j_i - l_{k_3})}$$

$$\frac{(n_i + j_{ik} + j_{sa} + j_{sa}^{ik} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{sa} + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

$$D \geq n < n \wedge l = l_k \geq 0 \wedge$$

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

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + l_k \wedge$$

$$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$



$$fzS_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

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

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{n_{ik}+j_{ik}-j_{sa}} \sum_{n_s=n-j_i}^{n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} + n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_{sa} - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{n+j_{sa}^{ik}-s} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n+j_{sa}-s)} \sum_{j_i=j_{sa}+l_i-l_{sa}}$$

$$\begin{aligned}
& \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_k+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
& \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
& \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
& \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
& \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - j^{s_a} - j_{i_k})!} \cdot \\
& \frac{(n_{s_a} - 1)!}{(j^{s_a} - j_s - 1)! \cdot (n_{s_a} + j^{s_a} - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})^{j^{s_a} - l_{i_k}} \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\sum_{k=1}^{\binom{()}{j_s=j_{i_k}+l_s-l_{i_k}}} \sum_{\binom{()}{j_s=j_{i_k}+l_s-l_{i_k}}}$$

$$\sum_{j_{i_k}=l_{s_a}+n+j_{s_a}^{i_k}-D-j_{s_a}}^{n+j_{s_a}^{i_k}-s} \sum_{(j^{s_a}=j_{i_k}+j_{s_a}-j_{i_k}^{i_k})}^{\binom{()}{j_s=j_{i_k}+l_s-l_{i_k}}} \sum_{j_i=j^{s_a}+l_i-l_{s_a}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})}^{\binom{()}{j_s=j_{i_k}+l_s-l_{i_k}}} \sum_{n_s=n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

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

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{lk} - j_{sa}^{lk} - l_{sa})!}$$

$$\frac{(n - l_i)!}{(n - j_i) \cdot (n - j_i)!}$$

$$\sum_{s=1}^{j_s} \sum_{j_s=j_{ik}+l_s-l_{ik}}$$

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

$$\sum_{n+l_{ik}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+l_{ik}-j_s+1)}^{n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{(n_{sa}=n+l_{k3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=1}^{( )} \sum_{j_s=j_{sa}^{ik} - l_{ik}}^{( )} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-j_{ik}}^{( )} \sum_{j_i=j_{sa}+l_i-l_{sa}}^{( )} \sum_{n_i=n+k}^{( )} \sum_{n_i=n+k-j_s}^{( )} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{( )} \sum_{n_s=n_{sa}+j_{sa}^{ik}-j_i-k_3}^{( )} \frac{(n_i + j_{ik} + j_{sa} - j_{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j_{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

$$D \geq n < n \wedge I = k \geq 0 \wedge$$

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

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$\mathbb{k}_Z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned}
 f_Z^S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{(l_{sa} + n - D - j_{sa})} \sum_{(j_s = l_{ik} + n - D - j_{sa} + 1)} \\
 &\sum_{j_{ik} = j_s + l_{ik} - l_s}^{(n + j_{sa} - s)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + l_i - l_s} \\
 &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{ik} - \mathbb{k}_1}^{(n_{ik} + j_{ik} - \mathbb{k}_2)} \sum_{n_{sa} = j^{sa} + \mathbb{k}_3}^{(n_{sa} + j^{sa} - \mathbb{k}_3)} \sum_{j_i = n - j_i + 1} \\
 &\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=1}^{(n-s+1)} \sum_{(j_s = l_{sa} + n - D - j_{sa} + 1)}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k} \sum_{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i+l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)} \sum_{n_s=j_i+1} \\
 & \frac{(n_i-1)}{(j_s-2)(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s)(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}+n_{sa}-1)}{(j^{sa}-j_{ik}+1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s+1)!}{(j_i-j^{sa}-1)(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=1} \sum_{(n-s+1)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(n)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k} \sum_{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}}{\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

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

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \sum_{n_i=n+\mathbb{k}} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)} \sum_{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)} \sum_{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$



$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - l_{sa})!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(n-s+1)} \\
& \sum_{j_{ik}+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_i=j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}=n+l_k-j_s+1)}^{n_{is}+j_s-j_{ik}-l_{k1}} \\
& \sum_{(n_{sa}=n+l_{k3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k3}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
\end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{n-s+l_i} \sum_{l_{sa}=l_{sa}+n-D-j_{sa}-k}$$

$$\sum_{j_{ik}=j_s}^{n-l_s} \sum_{(j_{sa}=j_{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j_i=l_i-l_{sa}}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_s+j_s+1)}^{n-j_s+1} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2} \sum_{n_s=n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i + j_{sa} + j_{sa}^{ik} - j_{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - j_{sa} - j_{sa}^{ik} - k_3)! \cdot (n + j_{ik} + j_{sa} - j_{sa}^{ik} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + l_{k_1} \wedge$$

$$l_{k_2}: z = 3 \wedge l_{k_2} = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_{z^s} S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{k_1})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_i+j_{sa}-s)}^{(j_i+j_{sa}-s)} \sum_{j_i=l_{i_1}+n-D}^n$$

$$\sum_{n_i=n+l_{k_1}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}}$$

$$\frac{(n_{ik}-j_{sa}-1)!}{(n_{ik}-j_{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)} \sum_{j_i=l_i+n-n}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{(n_s=n_{sa}+j^{sa}-j_i)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n_{ik} + j_{sa}^{sa} - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

$l_{k_1} - j_{sa}^{ik} + 1 \leq l_{k_2} \wedge l_{sa}^{sa} + j_{sa}^{ik} - j_{sa} > l_{k_3} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge I = l_{k_1} = 0 \wedge$

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

$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, l_{k_3}, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s + l_k \wedge$

$l_k; z = 3, l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_i+j_{sa}-s)}^{(j_i+j_{sa}-s)} \sum_{j_i=l_i+n-D}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=1}^{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{\binom{()}{j_i=l_i+n-D}}^{\binom{()}{j_i=l_i+n-D}}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-\mathbb{k}_1} \sum_{(n_{s_a}=n_{i_k}+j_{i_k}-j^{s_a}-\mathbb{k}_2)}^{(\ )} \sum_{n_s=n_{s_a}+j^{s_a}-j_i-\mathbb{k}_3} \frac{(n_i + j_{i_k} + j_{s_a} - j^{s_a} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{s_a}^{i_k})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{i_k} + j_{s_a} - j^{s_a} - s - j_{s_a}^{i_k})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)!}$$

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

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

$j_{i_k} + j_{s_a} - j_{s_a}^{i_k} \leq j^{s_a} \leq j_i + j_{s_a} - s \wedge j_i + s - j_{s_a} \leq j_i - n \wedge$

$l_{i_k} - j_{s_a}^{i_k} + 1 = l_s \wedge l_{s_a} + j_{s_a}^{i_k} - j_i > l_{i_k} \wedge l_{s_a} + j_{s_a} - s > l_s \wedge$

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

$j_{s_a} = j_{s_a}^i - 1 \wedge j_{s_a}^{i_k} = j_{s_a} - 1 \wedge j_{s_a}^{s_a} = j_{s_a}^{i_k} - 1$

$s: \{j_{s_a}^s, \mathbb{k}_1, j_{s_a}^{i_k}, \mathbb{k}_2, \mathbb{k}_3, j_{s_a}^i\} \wedge$

$s \cdot 4 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz^S_{j_s, j_{i_k}, j^{s_a}, j_i} = \sum_{k=1} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{(\ )}$$

$$\sum_{j_{i_k}=l_{i_k}+n-D}^{j^{s_a}+j_{s_a}^{i_k}-j_{s_a}} \sum_{(j^{s_a}=l_{s_a}+n-D)}^{(l_i+n+j_{s_a}-D-s-1)} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+\mathbb{k}_2+\mathbb{k}_3-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_s)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_s-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{is}+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n-j_i-1)!} \cdot \frac{(l_s-2)!}{(j_s-2)!} \cdot \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(j^{sa}+l_{sa}-j_{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}-l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \sum_{k=1}^{\binom{D}{j_s=j_{ik}+l_s-l_{ik}}}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+s-j_{sa}}^n \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

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$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{\substack{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa} \\ (j^{sa}=l_i+n+j_{sa}-D-s) \\ j_i=j^{sa}+s-j_{sa}}}^{\binom{()}{n+j_{sa}-s}} \sum_{\substack{n_i=n+k \\ (n_{is}=n+k-j_s+1) \\ n_{ik}=n_{is}+j_s-j_{ik}-k_1}}^{\binom{()}{n_i-j_s+1}} \sum_{\substack{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2) \\ n_s=n_{sa}+j^{sa}-j_i-k_3}}^{\binom{()}{n_i-j_s+1}} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

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

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

$$\sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\begin{aligned}
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(n_i - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{j_{ik}=l_s}^{j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{j_{sa}^{ik}=D-1}^{(n + j_{sa} - s)} \sum_{j_i=j^{sa} + s - j_{sa}}^n \\
& \sum_{n+l_k}^{(n_i - j_s)} \sum_{(n_{is}=n+l_k - j_s + 1)}^{n_{is} + j_s - j_{ik} - l_{k_1}} \\
& \sum_{(n_{sa}=n+l_{k_3} - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - l_{k_2})} \sum_{n_s=n - j_i + 1}^{n_{sa} + j^{sa} - j_i - l_{k_3}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{j_s=j_{sa}^{ik} - l_{sa} - l_{ik}}$$

$$\sum_{j_{ik}=j_{sa} + j_{sa}^{ik} - j_{sa}}^{(n+l_i-s)} \sum_{j_i=j_{sa} + s - j_{sa}}^{(n+l_i+n+j_{sa}-l_{sa})}$$

$$\sum_{n_i=n+l_{sa}}^{n} \sum_{n_{ik}=n+l_{sa}-j_{sa}}^{(j_{sa}+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{ik}-l_{k1}}$$

$$\sum_{n_{ik}=n_{ik}+j_{ik}-l_{k2}}^{( )} \sum_{n_s=n_{sa}+j_{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z \mathcal{S}_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_s)}^{(\quad)}$$

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

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_1}^{n_{is}+j_{ik}-\mathbb{k}_1} \sum_{j_{ik}+1}^n$$

$$\sum_{(j^{sa}+1)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{n_{sa}=n-j_i+1}^{n_{sa}+j_{sa}-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_s)}^{(\quad)}$$

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$$\begin{aligned}
 & \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{n + j_{sa}^{ik} - s} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(n + j_{sa} - s)} \sum_{j_i = j^{sa} + s - j_{sa}}^n \\
 & \sum_{n_i = n + l_k}^n \sum_{(n_{is} = n + l_k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + l_{k_2} + l_{k_3} - j_i}^{n_{is} + j_s - j_{ik} - l_{k_1}} \\
 & \sum_{(n_{sa} = n + l_{k_3} - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - l_{k_2})} \sum_{n_s = j_i + 1}^{n_{sa} + j^{sa} - j_i - 1} \\
 & \frac{(n_i - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=1}^{\binom{()}{j_s = j_{ik} + l_s - l_{ik}}} \sum_{\binom{()}{j_s = j_{ik} + l_s - l_{ik}}} \\
 & \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{n + j_{sa}^{ik} - s} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{\binom{()}{j_s = j_{ik} + l_s - l_{ik}}} \sum_{j_i = j^{sa} + s - j_{sa}}^n
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-\mathbb{k}_1} \sum_{(n_{s_a}=n_{i_k}+j_{i_k}-j^{s_a}-\mathbb{k}_2)}^{(\ )} \sum_{n_s=n_{s_a}+j^{s_a}-j_i-\mathbb{k}_3} \frac{(n_i + j_{i_k} + j_{s_a} - j^{s_a} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{s_a}^{i_k})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{i_k} + j_{s_a} - j^{s_a} - s - j_{s_a}^{i_k})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)}$$

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

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

$j_{i_k} + j_{s_a} - j_{s_a}^{i_k} \leq j^{s_a} \leq j_i + j_{s_a} - s \wedge j_i + s - j_{s_a} \leq j_i - n \wedge$

$l_{i_k} - j_{s_a}^{i_k} + 1 = l_s \wedge l_{s_a} + j_{s_a}^{i_k} - j_i > l_{i_k} \wedge l_{s_a} + j_{s_a} - s > l_s \wedge$

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

$j_{s_a} = j_{s_a}^i - 1 \wedge j_{s_a}^{i_k} = j_{s_a} - 1 \wedge j_{s_a}^{s_a} = j_{s_a}^{i_k} - 1$

$s: \{j_{s_a}^s, \mathbb{k}_1, j_{s_a}^{i_k}, \mathbb{k}_2, \mathbb{k}_3, j_{s_a}^i\} \wedge$

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

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz S_{j_s, j_{i_k}, j^{s_a}, j_i} = \sum_{k=1} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{(\ )}$$

$$\sum_{j_{i_k}=l_s+n+j_{s_a}^{i_k}-D-s-1}^{l_i+n+j_{s_a}^{i_k}-D-s-1} \sum_{(j^{s_a}=l_{s_a}+n-D)}^{(n+j_{s_a}-s)} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+\mathbb{k}_2+\mathbb{k}_3-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_s-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{is}+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n-j_i-1)!} \cdot \frac{(l_s-2)!}{(j_s-2)!} \cdot \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(j^{sa}+j_{sa}^{lk}-l_{ik})! \cdot (j^{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}-l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{n+j_{sa}^{lk}-s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+s-j_{sa}}^n$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

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$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{(\quad)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\quad)} \\
& \sum_{j_{ik} = l_i + n + j_{sa}^{lk} - D - s}^{n + j_{sa}^{ik} - s} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(\quad)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
& \sum_{n_i = n + l_k}^n \sum_{(n_{is} = n + l_k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - l_{k1}} \\
& \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - l_{k2})}^{(\quad)} \sum_{n_s = n_{sa} + j^{sa} - j_i - l_{k3}} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

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

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_{sa}+n-D)}^n \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_i-j_s+1)}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\begin{aligned}
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \cdot \\
& \frac{(n - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=0}^{(n-s+1)} \sum_{l=0}^{D-s+1} \sum_{i_k=j_s+l_{ik}-l_s}^{(n-s)} \sum_{i_{ik}=j_{sa}+s-j_{sa}}^n \sum_{i_s=n+l_k}^{(n_i-j_s)} \sum_{i_{is}=n+l_k-j_s+1}^{n_{is}+j_s-j_{ik}-l_{k1}} \\
& \sum_{i_{ik}=j_s+l_{ik}-l_s}^{(n-s)} \sum_{i_{ik}=j_{sa}+s-j_{sa}}^n \sum_{i_s=n+l_k}^{(n_i-j_s)} \sum_{i_{is}=n+l_k-j_s+1}^{n_{is}+j_s-j_{ik}-l_{k1}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(s-1)} \binom{(s-1)}{k-1} \binom{(s-1)}{s-1-k}$$

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

$$\sum_{n_i=n+l_{ik}-1}^{(n+l_{ik}-j_s-1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{(n+l_{ik}-j_s-1)}$$

$$\sum_{(n_{ik}+j_{ik}-j_{sa}-k_2)}^{(n+l_{ik}-j_s-1-k_2)} \sum_{n_s=n_{sa}+j_{sa}-j_i-k_3}^{(n+l_{ik}-j_s-1-k_2)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - l_{ik} - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

$$D \geq n < n \wedge I = k \geq 0 \wedge$$

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

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z \mathcal{S}_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=l_s+n-D)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_{sa}+n-D)}^{(n+j_{sa}-s)} \sum_{j_i=l_i+n-}^n$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}+j_{ik}-\mathbb{k}_1)}^{n_{is}+j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(n_{sa}+j_{sa}-\mathbb{k}_3)}^{n_{sa}+j_{sa}-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(n_{sa} - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(n_{sa} - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} (j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}) \sum_{j_i=j^{sa}+s-j_{sa}}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+s-j_{sa}}^n$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i}$$

$$\frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot$$

$$\frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot$$

$$\frac{(n_{ik}+n_{sa}-1)!}{(j^{sa}-j_{ik}+1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot$$

$$\frac{(n_{sa}-n_s+1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot$$

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

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot$$

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

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot$$

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

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} (j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}) \sum_{j_i=j^{sa}+s-j_{sa}}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}}^n$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-\mathbb{k}_1}$$

$$\sum_{(n_{s_a}=n_{i_k}+j_{i_k}-j^{s_a}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{s_a}+j^{s_a}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i + j_{i_k} + j_{s_a} - j^{s_a} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{s_a}^{i_k})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{i_k} + j_{s_a} - j^{s_a} - s - j_{s_a}^{i_k})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)}$$

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

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

$j_{i_k} + j_{s_a} - j_{s_a}^{i_k} \leq j^{s_a} \leq j_i + j_{s_a} - s \wedge j_i + s - j_{s_a} \leq j_i - n \wedge$

$l_{i_k} - j_{s_a}^{i_k} + 1 > l_s \wedge l_{s_a} + j_{s_a}^{i_k} - j_i = l_{i_k} \wedge l_{s_a} + j_{s_a} - s = l_s \wedge$

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

$j_{s_a} = j_{s_a}^i - 1 \wedge j_{s_a}^{i_k} = j_{s_a} - 1 \wedge j_{s_a}^s = j_{s_a}^{i_k} - 1$

$s: \{j_{s_a}^s, \mathbb{k}_1, j_{s_a}^{i_k}, \mathbb{k}_2, \mathbb{k}_3, j_{s_a}^i\} \wedge$

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

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$f^Z S_{j_s, j_{i_k}, j^{s_a}, j_i} = \sum_{k=1}^{(j_{i_k} - j_{s_a}^{i_k} + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{i_k} = j^{s_a} + l_{i_k} - l_{s_a}}^{()} \sum_{(j^{s_a} = j_i + l_{s_a} - l_i)}^{()} \sum_{j_i = l_i + n - D}^n$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{i_s} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - \mathbb{k}_1}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_i)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(j_s + j_i - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(j_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - l_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!}$$

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

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\ )} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\ )} \sum_{j_i=l_i+\mathbf{n}-D}^{\mathbf{n}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\ )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (\mathbf{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$S_{j_{sa}^s, j_i} = \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - D)}^{(n + j_{sa} - s)} \sum_{(j_{ik} - l_{sa})}^{(n - j_s + 1)} \sum_{(j_i = j^{sa} + l_i - l_{sa})}^{(n_{is} + j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$



$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

$$\sum_{n + l_k}^{(n_i - l_i - 1)} \sum_{(n_{is} = n + l_k - j_s + 1)}^{(n_i - l_i - 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - l_{k_1}}^{(n_i - l_i - 1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - l_{k_2})}^{(n_i - l_i - 1)} \sum_{n_s = n_{sa} + j^{sa} - j_i - l_{k_3}}^{(n_i - l_i - 1)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - l_i - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{j_s - j_{sa}^{ik} + 1} \sum_{j_s = n - D}^{n - D} \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D}^{n + j_{sa}^{ik} - s} \sum_{j_{ik} + l_{sa} - l_i = j_{sa} + l_i - l_{sa}} \sum_{n_i = n + \mathbb{k} (n_{is} + \mathbb{k} - j_s + 1)}^{(n_i - 1) - \mathbb{k}_1} \sum_{(n_{ik} + j_{sa} - \mathbb{k}_2)}^{n_{sa} + j_{sa} - j_i - \mathbb{k}_3} \sum_{(n_{sa} - \mathbb{k}_3 - j_{sa} + 1)}^{n_s = n - j_i + 1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{( )} \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{n + j_{sa}^{ik} - s} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{( )} \sum_{j_i = j_{sa} + l_i - l_{sa}}^{( )} \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_{sa}^{ik} - 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - k_1}^{( )} \sum_{(j_{sa} = n_{ik} + j_{sa} - k_2)}^{( )} \sum_{j_i = j_{sa} - k_3}^{( )} \frac{(n_i + j_{ik} + j_{sa} - j_{sa}^{ik} - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n - j_{ik} + j_{sa} - j_{sa}^{ik} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

$$D \geq n < n \wedge k_1 = k_2 = k_3 > 0 \wedge$$

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

$$s: \{j_{sa}^s, k_1, k_2, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

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

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{n+j_{sa}^{ik}-s} \binom{(\quad)}{\quad} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{n+j_{sa}^{ik}-s} \binom{(\quad)}{\quad} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}
 \end{aligned}$$

$$\begin{aligned}
& \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot (n - j_i)! \\
& \frac{(l_s - 2)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} \cdot \\
& \sum_{k=1} \sum_{\substack{(n-s+1) \\ (j_s=l_i+\mathbf{n}-D-s+1)}} \\
& \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{\substack{(\cdot) \\ (j^{sa}=j_{ik}+l_{sa}-l_{ik})}} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}_1}^{\mathbf{n}} \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=\mathbf{n}+\mathbb{k}_2-j_s+1)}} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{\substack{(\cdot) \\ (n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (\mathbf{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}
\end{aligned}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

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

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_{ik} = l_{ik} + l_s - j_{sa}^{ik}}^{(n_{sa} - l_s - j_{sa}^{ik} + 1)} \sum_{j_i = l_{sa} + n + s - D - j_{sa}}^{(n_{sa} - l_s - j_{sa}^{ik} + 1)}$$

$$\sum_{n_{ik} = n_{is} + n + k - j_s + 1}^{(n_i - l_i - 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa}^{ik} - k_2)}^{(n_i - l_i - 1)} \sum_{n_s = n_{sa} + j_{sa}^{ik} - j_i - k_3}$$

$$\frac{(n_i + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - l_i - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\binom{l_{ik}-j_{sa}^{ik}+1}{j_s-n-D}} \sum_{(n_{is}-s)} \sum_{j_{ik}=j_{sa}+l_i}^{\binom{n_{is}+1}{(n_{is}+1)+l_i+l_{ik}-\mathbb{k}_1}} \sum_{(i_{sa}=l_{sa}+n_{is}-j_{sa}-l_i)}^{\binom{n_{is}+1}{(n_{is}+1)+l_i+l_{ik}-\mathbb{k}_1}} \sum_{(i_i=j_{sa}+l_i-l_{sa})}^{\binom{n_{is}+1}{(n_{is}+1)+l_i+l_{ik}-\mathbb{k}_1}} \sum_{n_i=n+\mathbb{k}}^{\binom{n_{is}+1}{(n_{is}+1)+l_i+l_{ik}-\mathbb{k}_1}} \sum_{(n_{is}+1)+l_i+l_{ik}-\mathbb{k}_1}^{\binom{n_{is}+1}{(n_{is}+1)+l_i+l_{ik}-\mathbb{k}_1}} \sum_{(n_{ik}-j_{sa}-\mathbb{k}_2)}^{\binom{n_{is}+1}{(n_{is}+1)+l_i+l_{ik}-\mathbb{k}_1}} \sum_{n_{sa}=j_{sa}-j_i-\mathbb{k}_3}^{\binom{n_{is}+1}{(n_{is}+1)+l_i+l_{ik}-\mathbb{k}_1}} \sum_{(n_{sa}=l_{sa}-j_{sa}+1)}^{\binom{n_{is}+1}{(n_{is}+1)+l_i+l_{ik}-\mathbb{k}_1}} \sum_{n_s=n-j_i+1}^{\binom{n_{is}+1}{(n_{is}+1)+l_i+l_{ik}-\mathbb{k}_1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$\sum_{k=1}^{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}} \sum_{j_{ik}=j_{sa}^{ik}+l_{ik}-l_{sa}}^{\binom{()}{j_{sa}=l_{sa}+n-D}} \sum_{j_i=j_{sa}^{ik}+l_i-1}^{\binom{()}{n_i=n+l_k}} \sum_{n_{is}=n+l_k-j_s+1}^{\binom{()}{n_i-j_s+1}} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}^{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-1}} \sum_{n_s=n_{sa}+j_{sa}^{ik}-j_i}^{\binom{()}{n_{sa}+j_{sa}^{ik}-j_i}} \frac{(n_i + j_{ik} + j_{sa} - j_{sa}^{ik} - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n_i + j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

$$l_{ik} - j_{sa}^{ik} + 1 > 0 \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k_1 = 0 \wedge$$

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

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$z = 2 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

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

$$\begin{aligned}
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa}}^{n+j_{sa}^{ik}-s} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{\binom{()}{n_{is}=n+l_k-j_s+1}}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{\binom{()}{n_{sa}=n+l_{k_3}-j^{sa}+1}}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{\binom{()}{n_s=j_i+1}}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{\binom{()}{n_i-1}}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s-2) \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}+n_{sa}-1)!}{(j^{sa}-j_{ik}+1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-n_s+1)!}{(j_i-j^{sa}-1) \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot
 \end{aligned}$$

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

$$\begin{aligned}
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa}}^{n+j_{sa}^{ik}-s} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{\binom{()}{n_{is}=n+l_k-j_s+1}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}}{\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}}$$

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

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

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

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

$$D \geq n < n \wedge I = k \geq 0 \wedge$$

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

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

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

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

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j^{sa} + 1)!}{(j_s + l_{ik} - j_s - l_{ik} - 1)! \cdot (j_{ik} - j_s - j^{sa} + 1)!} \cdot \\
& \frac{(D - l_s - j^{sa} + 1)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(n-s+1)} \\
& \sum_{j_i=j_s+j_{sa}-1}^{n+j_{sa}^{ik}-s} \binom{()}{j_i} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1)}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
& \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
\end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{n-s+l_s-1} \sum_{l_{sa}=l_s+n-D-j_{sa}^{ik}}$$

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

$$\sum_{n=n+l_k}^n \sum_{n_{is}=n+l_k}^{n-l_{sa}-j_s+1} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k2}} \sum_{n_s=n_{sa}+j_{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{sa} + j_{sa}^{ik} - j_{sa}^{ik} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j_{sa}^{ik} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - 1)}^{(j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = j_{sa} + l_{ik} - l_{sa}}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_{sa} = j_i + l_{sa} - l_{sa})}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_{sa} = j_i + l_{sa} - l_{sa})}^{(j_{ik} - j_{sa}^{ik} + 1)}$$

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

$$\sum_{(n_{ik} = n_{sa} + k_3 - j_{ik} + 1)}^{(n_{ik} = n_{sa} + k_3 - j_{ik} + 1)} \sum_{(n_{ik} = n_{sa} + k_3 - j_{ik} + 1)}^{(n_{ik} = n_{sa} + k_3 - j_{ik} + 1)}$$

$$\sum_{(n_{ik} = n_{sa} + k_3 - j_{ik} + 1)}^{(n_{ik} = n_{sa} + k_3 - j_{ik} + 1)} \sum_{(n_s = n - j_i + 1)}^{(n_s = n - j_i + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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$$\sum_{k=1}^{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}} \sum_{j_{ik}=j_{sa}^{ik}+l_{ik}-l_{sa}}^{\binom{()}{j_{sa}^{ik}=j_i+l_{sa}-l_i}} \sum_{j_i=l_{ik}+s+n-D}^n \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}^{\lfloor \frac{n_i-j_s+1}{2} \rfloor} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-k_2}^{\binom{()}{j_{sa}^{ik}=n_{sa}+j_{sa}^{ik}-j_i}} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-k_2}^{\binom{()}{j_{sa}^{ik}=n_{sa}+j_{sa}^{ik}-j_i}} \frac{(n_i + j_{ik} + j_{sa} - j_{sa}^{ik} - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n_i + j_{sa}^{ik} - j_{sa}^{ik} - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

$$l_{ik} - j_{sa}^{ik} + 1 > 0 \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq 4 < n \wedge I = k_1 + k_2 + k_3 = 0 \wedge$$

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

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

$$s = 4 \wedge s = 4 + k \wedge$$

$$z = 2 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz_{j_s, j_{ik}, j_{sa}^{ik}, j_i} = \sum_{k=1}^{\binom{()}{j_{ik}-j_{sa}^{ik}+1}} \sum_{j_s=l_s+n-D}^n$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{sa}+l_{ik}-l_{sa}} \sum_{(n+j_{sa}-s)}^{(n+j_{sa}-s)} \sum_{j_i=j_{sa}^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{i_1}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}+n_{sa}-1)!}{(j_{sa}-j_{ik}-1)!(n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{sa}+l_{ik}-l_{sa}} \sum_{(n+j_{sa}-s)}^{(n+j_{sa}-s)} \sum_{j_i=j_{sa}^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$



$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}}$$

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

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

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

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

$D \geq n < n \wedge l = k \geq 0 \wedge$

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

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

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

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

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} - j_{sa} + 1)}^{( )} \\
& \sum_{j_{ik} = n - D}^{n + j_{sa}^{ik} - s} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{( )} \sum_{j_i = j^{sa} + l_i - l_{sa}}^{( )} \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \\
& \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{( )} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

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

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

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

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

$$D \geq n < n \wedge I = k \geq 0 \wedge$$

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

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} & \sum_{j_{ik}=l_{ik}+n-D}^{n+j_{sa}} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(l_{ik}+n-D-j_{sa})} \sum_{j_s=j^{sa}+s-j_{sa}}^{(l_{ik}+n-D-j_{sa})} \\ & \sum_{n+k}^{(n_i-j_s)} \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{n_{sa}+j^{sa}-j_i-k_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \end{aligned}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{n+j_{sa}^{ik}-s} \sum_{(j_{sa}=j_s+l_{sa}-l_{ik})} \dots - l_{sa}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-j_{ik}-l_{k1})} \dots$$

$$\sum_{(n_{ik}+j_{ik}-l_{k2})} \sum_{(n_{sa}=n-j_i-l_{k3})} \dots - j_i-l_{k3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - \dots)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_s - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

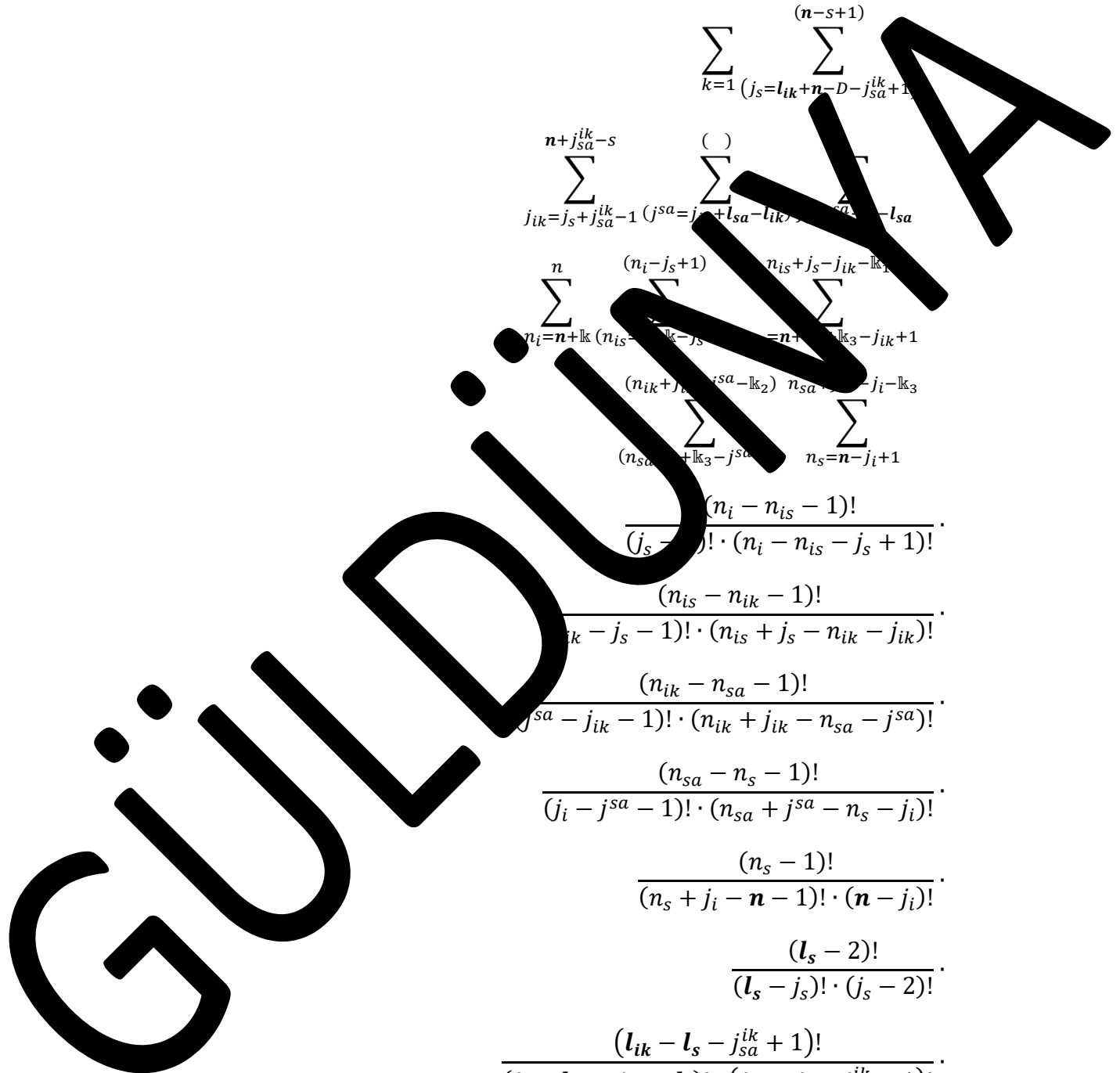
$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$



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

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

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}^{( )}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{(n_{sa}=n_{sa}+j^{sa}-j_i)}^{( )}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n_i + j_{sa} - j^{sa} - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

$$D \geq n < n \wedge I = k_1 + k_2 + k_3 = 0 \wedge$$

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

$$s: \{j_{sa}^{ik}, k_1, j_{sa}^{ik}, k_2, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$z = 2 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

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

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{(j_i+j_{sa}-s) \\ (j^{sa}=l_{sa}+n-D)}} \sum_{j_i=l_i+n-D}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+l_k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-k_1 \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i \\ n_s-j_i+1}} \\
 & \frac{(n_i-1)}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=1}^{\binom{()}{}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{\binom{()}{}} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{() \\ (j^{sa}=j_i+j_{sa}-s)}} \sum_{j_i=l_i+n-D}^n
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-\mathbb{k}_1} \sum_{(n_{s_a}=n_{i_k}+j_{i_k}-j^{s_a}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{s_a}+j^{s_a}-j_i-\mathbb{k}_3} \frac{(n_i + j_{i_k} + j_{s_a} - j^{s_a} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{s_a}^{i_k})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{i_k} + j_{s_a} - j^{s_a} - s - j_{s_a}^{i_k})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)}$$

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

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

$$j_{i_k} + j_{s_a} - j_{s_a}^{i_k} \leq j^{s_a} \leq j_i + j_{s_a} - s \wedge j_i + s - j_{s_a} \leq j_i - n \wedge$$

$$l_{i_k} - j_{s_a}^{i_k} + 1 > l_s \wedge l_{s_a} + j_{s_a}^{i_k} - j_i = l_{i_k} \wedge l_{i_k} + j_{s_a} - s > l_s \wedge$$

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

$$j_{s_a} = j_{s_a}^i - 1 \wedge j_{s_a}^{i_k} = j_{s_a} - 1 \wedge j_{s_a}^s = j_{s_a}^{i_k} - 1$$

$$s: \{j_{s_a}^s, \mathbb{k}_1, j_{s_a}^{i_k}, \mathbb{k}_2, \mathbb{k}_3, j_{s_a}^i\} \wedge$$

$$s \geq 4 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

$$\mathbb{k}_2: s = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$f^Z_{j_s, j_{i_k}, j^{s_a}, j_i} = \sum_{k=1}^{(j_{i_k} - j_{s_a}^{i_k} + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{i_k} = j^{s_a} + l_{i_k} - l_{s_a}} \sum_{(j^{s_a} = l_{s_a} + n - D)}^{(l_i + n + j_{s_a} - D - s - 1)} \sum_{j_i = l_i + n - D}^n$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{i_s} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - \mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_i + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(j_s - 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}^n \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{n} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - j_{sa} - j_{ik} + 1)!}{(j_s + l_{ik} - j_{sa} - l_s)! \cdot (j_{ik} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(l_i - j_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \\
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(n+j_{sa}-s)} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{(n_i-j_s+1)} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{(\cdot)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}^{(\cdot)} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} f z^S j_s, j_{sa}, j_i &= \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - D)} \\ & \sum_{l_i = n + j_s - D - s - 1}^{l_i + n + j_s - D - s - 1} \sum_{(j_{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = l_i + n - D}^n \\ & \sum_{n_i = n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\ & \sum_{(n_{sa} = n + \mathbb{k}_3 - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j_{sa} - j_i - \mathbb{k}_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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

$$\frac{(n - l_i)!}{(D + j_i - n - l_i)! \cdot (j_i)!}$$

$$\sum_{j_{ik}=0}^{n+j_{sa}^{ik}-s} \sum_{j_i=j_{sa}^{ik}+s-j_{sa}}^n \sum_{j_i=0}^{n-D} \binom{j_{ik}-j_{sa}^{ik}+1}{j_i}$$

$$\sum_{j_{ik}=0}^{n+j_{sa}^{ik}-s} \sum_{j_i=j_{sa}^{ik}+s-j_{sa}}^n \sum_{j_i=0}^n \binom{n+j_{sa}^{ik}-D-s}{j_i}$$

$$\sum_{j_{ik}=0}^{n+l_k} \sum_{n_{is}=n+l_k-j_s+1}^{n-j_s} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{j_s=j_{ik}+j_{sa}^{ik}+1}^{( )} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D}^{n+j_{sa}^{ik}-s} \sum_{j_{sa}^{ik}=j_{ik}+l_{sa}-D}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}}^{( )} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

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

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

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{(j_{ik}=n+k_2+k_3-j_s+1)}^{(n_{is}+j_s-j_{ik}-k_1)}$$

$$\frac{(n_{is}+j_s-j_{ik}-k_1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

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

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!}$$

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

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

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$$\begin{aligned}
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+s-j_{ik}}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{ik}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_s=n-j_i)}^{(n_{sa}+j_{ik}-j_i-l_{k_3})} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)}
 \end{aligned}$$

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

$$\sum_{n_i=n+l_k}^n \sum_{\binom{()}{n_{is}=n+l_k-j_s+1}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}$$

$$\sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}} \sum_{\binom{()}{n_s=n_{sa}+j_i-j_{i_3}}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} - j_{sa} - j^{sa} - j_{sa} - j_{ik})!}$$

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

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

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

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

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

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

$$D \geq n < n \wedge I = l_{sa} = 0 \wedge$$

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

$$s: \{l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i, l_{k_3}, j_{sa}^i\}$$

$$= 4 \wedge l_{k_1} = s + l_{k_2} \wedge$$

$$l_{k_2}: z = 3 \wedge l_{k_1} = l_{k_2} + l_{k_3} \Rightarrow$$

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

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{\binom{()}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{j_i=l_i+n-D}^n$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n + 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=l_i+n-D}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

$D \geq n < n \wedge l = k \geq 0 \wedge$

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

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^{ik}\} \wedge$

$s = 4 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

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

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

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

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

$$\frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_s - 1)! \cdot (j_{ik} - j_{sa} - j_{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j_{ik} + j_{sa} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D - l_i)!}{(D + 1 - n - l_i)! \cdot (n - j_i)!} \cdot$$

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

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

$$\sum_{n_i = n + k_1}^n \sum_{(n_{is} = n + k_1 - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{( )} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{sa}, j_i} = \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - D)}^{(j_{sa} - s)}$$

$$\sum_{j_{ik} = l_{ik} - D}^{(j_{sa} - s)}$$

$$\sum_{n_i = n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa})!}$$

$$\frac{(D + j_i - n - l_i)! \cdot (n - j_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$(j_{ik} - j_{sa}^{ik} + 1)$$

$$\sum_{k=0}^{j_{ik} - j_{sa}^{ik} + 1}$$

$$\sum_{j_{ik}=l_{ik} - j_{sa}^{ik} - s}^{n + j_{sa}^{ik} - s}$$

$$\sum_{j_{sa}^{ik}=0}^{(n + j_{sa}^{ik} - s)}$$

$$\sum_{j_i=j^{sa} + l_i - l_{sa}}$$

$$j_{ik}=l_{ik} - j_{sa}^{ik} - D - s \quad (j^{sa} + j_{sa}^{ik} - j_{sa}^{lk}) \quad j_i=j^{sa} + l_i - l_{sa}$$

$$\sum_{n_{ik}+l_k}^n$$

$$\sum_{(n_i - j_{ik})}$$

$$\sum_{n_{is} + j_s - j_{ik} - l_{k_1}}$$

$$n_{ik}+l_k \quad (n_{is}=n+l_k - j_s + 1) \quad n_{ik}=n+l_{k_2} + l_{k_3} - j_{ik} + 1$$

$$(n_{ik} + j_{ik} - j^{sa} - l_{k_2}) \quad n_{sa} + j^{sa} - j_i - l_{k_3}$$

$$\sum_{(n_{sa}=n+l_{k_3} - j^{sa} + 1)} \sum_{n_s=n - j_i + 1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_s = j_{ik} - j_{sa}^{ik} + 1}^{n - j_{sa}^{ik} - s} \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - j_{sa} - j_{sa}^{ik} - 1}^{n + j_{sa}^{ik} - s} \sum_{j_{sa} = j_{ik} - j_{sa}^{ik} - j_{sa} + 1}^{j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa}}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}^{n_{is} + k} \sum_{n_{is} = n + j_s + 1}^{n} \sum_{n_{sa} = n_{ik} + j_{ik} - j_{sa} - k_2}^{n_{is} + k} \sum_{n_s = n_{sa} + j_{sa} - j_i - k_3}^{n_{is} + k}$$

$$\frac{(n_i + j_{ik} - j_{sa} - j_{sa}^{ik} - j_{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j_{sa}^{ik} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

$$D \geq n < n \wedge I = k \geq 0 \wedge$$

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

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=l_s+n-}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{n+j_{sa}^{ik}-s} \sum_{(j_{sa}=l_i+n+j_{sa})}^{(n+j_{sa}-s)} \sum_{i=j_s}^{n-l_{sa}}$$

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

$$\sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\begin{aligned}
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \frac{(n_{ik}+j_{ik}-j^{sa})! \cdot (n_{sa}+j_{sa}-j_i-l_{k_3})!}{(n_{sa}=n+l_{k_3}-j_{ik}+1)! \cdot (n_s=n-j_i+1)!} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}+j_s+1)!} \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-n_s-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \\
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)}
 \end{aligned}$$

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

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

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2})}^{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{(n_s=n_{sa}+j_{sa}-j_i-l_{k_3})}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \frac{(D - j_s - 1)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

$D \geq n < n \wedge I = l_{k_1} = 0 \wedge$

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

$s: \{l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^{ik}, l_{k_3}, j_{sa}^i\}$

$= 4 \wedge l_{k_1} = s + l_{k_2} \wedge$

$l_{k_2}: z = 3 \wedge l_{k_1} = l_{k_2} + l_{k_3} \Rightarrow$

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

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=j_i+l_{sa}-l_i)}^{(n)} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}$$



$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\
 \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 \frac{(n_{sa} - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot \\
 \frac{(n_s - 1)!}{(n_s + j_i - n + 1)! \cdot (n - j_i)!} \cdot \\
 \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-l_{k_1}}$$

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

$D \geq n < n \wedge I = k \geq 0 \wedge$

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

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

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

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

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j^{ik} + 1)!} \cdot \\
& \frac{(n_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j_{sa} + j^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} - j_{sa} + 1)}^{( )} \\
& \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(n + j_{sa} - s)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + l_i - l_{sa}} \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \\
& \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{( )} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{sa}, j_i} = \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - D)}^{(j_{ik} - j_{sa}^{ik} + 1)}$$

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

$$\sum_{n_i = n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa})!}$$

$$\frac{(D + j_i - n - l_i)! \cdot (n - j_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$(j_{ik} - j_{sa}^{ik} + 1)$$

$$\sum_{k=0}^{j_{ik} - j_{sa}^{ik} + 1}$$

$$n + j_{sa}^{ik} - s$$

$$(n + j_{sa}^{ik} - s)$$

$$\sum_{j_{ik}=l_{sa}+j_{sa}^{ik}-D-j_{sa}}$$

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

$$\sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$n$$

$$(n_i - j_i)$$

$$n_{is} + j_s - j_{ik} - l_{k_1}$$

$$\sum_{n_{is}+l_{k_1}}$$

$$\sum_{(n_{is}=n+l_{k_1}-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}$$

$$(n_{ik} + j_{ik} - j^{sa} - l_{k_2})$$

$$n_{sa} + j^{sa} - j_i - l_{k_3}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}$$

$$\sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

$$\sum_{n_{ik} + k (n_{is} = n + j_s + 1)}^n \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i + j_{ik} - j_i - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

$$D \geq n < n \wedge I = k \geq 0 \wedge$$

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

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(l_{sa}+n-D-j_{sa})} \sum_{(j_s=l_s+n-D)}^{(l_{sa}+n-D-j_{sa})} \sum_{j_{ik}=l_{ik}+n-D}^{n+j_{sa}^{ik}-s} \sum_{(j_{sa}=l_{sa})}^{(n+j_{sa}-s)} \sum_{i_i=j_{sa}^{ik}-l_{sa}}^{(n_i-j_s+1)} \sum_{n_i=n+k}^n \sum_{(n_i=n+k)}^{(n_i-j_s+1)} \sum_{n_{ik}=k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}} \sum_{(n_{ik}=k_2+k_3-j_{ik}+1)}^{(n_{ik}=k_2+k_3-j_{ik}+1)} \sum_{n_s=n-j_i+1}^{(n_{ik}=k_2+k_3-j_{ik}+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\begin{aligned}
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(n-s+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{ik}}^{(n+j_{sa}-s)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_s=n-j_i+1)}^{n_{sa}+j_s-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(n-s+1)}
 \end{aligned}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{\binom{()}{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}} \sum_{j_i=j_{sa}+l_i-l_{sa}}$$

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

$$\sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2}} \sum_{n_s=n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{\binom{()}{n_i+j_{ik}+j_{sa}-j_{sa}-s-k_1-k_2} \cdot \binom{()}{n_{is}=n+k-j_s+1}}{(n_i-n-k_1-k_2-k_3)! \cdot (n+j_{ik}+j_{sa}-j_{sa}^{ik})!} \cdot \frac{(l_s-2)!}{(l_s-j_s+1) \cdot (j_s-2)!} \cdot \frac{(D-j_s+1)!}{(D+j_s-n-l_i)! \cdot (n-j_i)!}$$

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

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

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

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

$$D \geq n < n \wedge l = k_1 = 0 \wedge$$

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

$$s: \{k_1, j_{sa}^{ik}, k_2, j_{sa}^{ik}, k_3, j_{sa}^i\}$$

$$= 4 \wedge l_{sa} = s + k_1 \wedge$$

$$k_z: z = 3 \wedge k_1 = k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}}$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}} \sum_{\binom{()}{j_{sa}=j_{sa}+1}}^{(j_i+j_{sa}-s)} \sum_{j_i=s+1}^{l_{sa}+j_{sa}-s}$$

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+\mathbb{k}_2+\mathbb{k}_3-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-\mathbb{k}_1} \\
 & \sum_{(n_{s_a}=n+\mathbb{k}_3-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{s_a} + j_i - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} - l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=1}^{\binom{()}{}} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})} \\
 & \sum_{j_{i_k}=j^{s_a}+l_{i_k}-l_{s_a}}^{(l_{s_a})} \sum_{(j^{s_a}=j_{s_a}+1)}^{(l_{s_a})} \sum_{j_i=l_{s_a}+j_{s_a}-s+1}^{l_i} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+\mathbb{k}_2+\mathbb{k}_3-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-\mathbb{k}_1} \\
 & \sum_{(n_{s_a}=n+\mathbb{k}_3-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-\mathbb{k}_3}
 \end{aligned}$$

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$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_i + l_s - l_{sa})!}{(j^{sa} + l_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

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

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{ik}, j_i} &= \sum_{k=1}^{\binom{()}{j_s}} (j_s - s) l_{ik} + j_{sa}^{ik} - s \\ &\sum_{j_{ik}=j^{sa}+l_{ik}}^{n} \sum_{j_{sa}=j_{sa}+1}^{n} \sum_{j_i=s+1}^{n} \\ &\sum_{j_i=j_s+1}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ &\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\ &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \end{aligned}$$

$$\begin{aligned}
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{\binom{()}{j_s=j_{sa}+l_{sa}-l_{ik}}} \sum_{l_{ik}}^{\binom{()}{l_s-l_{ik}}} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-1}^{\binom{()}{l_{ik}+j_{sa}-j_{sa}^{ik}}} \sum_{j_{sa}=j_{sa}+j_{sa}^{ik}-s+1}^{\binom{()}{j_{sa}+j_{sa}^{ik}-s+1}} \\
 & \sum_{n_i=n+l_k}^{\binom{()}{n+l_k-1}} \sum_{n_{ik}=n+l_k-j_s+l_{ik}-k_1}^{\binom{()}{n+l_k-1}} \sum_{n_{sa}=n+l_k-j_s+l_{ik}-k_2-k_3-j_{ik}+1}^{\binom{()}{n+l_k-1}} \\
 & \sum_{n_{sa}=n+l_k-j_s+l_{ik}-k_3-j_{sa}+1}^{\binom{()}{n+l_k-1}} \sum_{n_s=n-j_i+1}^{\binom{()}{n+l_k-1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{(\cdot)} \sum_{j_i=s+l_{ik}+j_{sa}^{ik}-s}^{(\cdot)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-l_{k_1}}^{(\cdot)}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(\cdot)} \sum_{(n_s=n_{sa}+j^{sa}-j_i)}^{(\cdot)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - l_{k_2} - l_{k_1} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n_{ik} + j_{sa}^{ik} - j^{sa} - l_{k_2} - l_{k_1} - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_i = 0 + s - n \wedge$

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

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

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

$D \geq n < n \wedge I = l_{k_1} = 0 \wedge$

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

$s: \{j_s^s, l_{k_1}, j_{sa}^{ik}, j_{sa}^{ik} - 1, j_{sa}^s, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s + l_k \wedge$

$l_k; z = 3 \wedge k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(j_i+j_{sa}-s)} \sum_{j_i=s+1}^{l_s+s-1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-1)} \sum_{j_i=l_s+s}^{l_i} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\begin{aligned}
& \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot (n - j_i)! \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{ik} - l_{sa} - s)!}{(j^{sa} - l_s - j_i - l_s - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{( )} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{( )} \sum_{j_i=s+1}^{l_s+s-1} \\
& \sum_{n_i=n+\mathbb{k}_1}^n \sum_{(n_{is}=n+\mathbb{k}_1-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}
\end{aligned}$$



$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} S_{i_s, j_i} &= \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \\ &= \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_{sa})} \sum_{(j^{sa} = j_{sa} + 1)}^{l_i} \sum_{j_i = j^{sa} + s - j_{sa}} \\ &= \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\ &= \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\ &= \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(l_i)!}{(D + j_i - n - l_i)! \cdot (j_i)!} \cdot \\
& \sum_{j_{ik}=j^{sa}+l_{ik}}^{(j_s-1)} \sum_{(j^{sa}=j_{sa}-2)}^{(l_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}}^{(n_i-j_{sa}-1)} \\
& \sum_{n_i=n+l_k}^{(n_{is}-n+l_k-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}^{(n_i-j_{sa}-1)} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{(n_i-j_{sa}-1)} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}^{(n_i-j_{sa}-1)} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - j_{sa} - 1 - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(j_s)} \sum_{(j_s - k + l_s - l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{ik}-s)} \sum_{(j_{sa}+1)}^{(j_{sa}+1)} j_i=j_{sa}+s-j_{ik}$$

$$\sum_{n_i=0}^n \sum_{(n_{is}=n+1)}^{(n_{is}+1)} \sum_{(n_{ik}=n-j_{ik}+1)}^{(n_{ik}+1)} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_s+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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$$\sum_{k=1}^{(\ )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\ )} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{sa}^{ik}-s)} \sum_{(j^{sa}=j_{sa}+1)} \sum_{j_i=j^{sa}+s-j_{ik}} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-l_{k1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{(\ )} \sum_{(n_s=n_{sa}+j^{sa}-j_i)} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - l_{k2} - l_{k1} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k1})! \cdot (n_{ik} + j_{sa}^{ik} - j^{sa} - j_{sa} - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(j_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_i \leq j_s + s - n \wedge$

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

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

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

$D \geq n < n \wedge I = l_{k1} = 0 \wedge$

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

$s: \{j_s^s, l_{k1}, j_{sa}^{ik}, l_{k2}, l_{k1}, l_{k3}, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s + l_k \wedge$

$z = 2 \wedge k = l_{k1} + l_{k2} + l_{k3} \Rightarrow$

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

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

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

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

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{(n_i-j_s+1)}$$

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$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

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

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

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

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - l_i)!}{(j_{ik} + l_{sa} - j^{sa} - l_i)! \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \\
& \sum_{k=j_{sa}^{ik} + 1}^{l_{sa} + j_{sa}^{ik} - j_{sa}}^{( )} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{( )} \sum_{j_i = j^{sa} + s - j_{sa}}^{( )} \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \\
& \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{( )} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{n+\mathbb{k}} \sum_{j_i=j_{sa}^{ik}+s-j_{sa}}^{n+\mathbb{k}-j_{ik}+l_{sa}-l_{ik}} \sum_{j_s=j_{sa}^{ik}+1}^{n+\mathbb{k}-j_{ik}+l_{sa}-l_{ik}} \sum_{j_i=j_{sa}^{ik}+s-j_{sa}}^{n+\mathbb{k}-j_{ik}+l_{sa}-l_{ik}} \sum_{j_s=j_{sa}^{ik}+1}^{n+\mathbb{k}-j_{ik}+l_{sa}-l_{ik}} \\
 & \frac{(n_i - j_s)^{n+\mathbb{k}} (n_{is} = n+\mathbb{k} - j_s + 1)^{n+\mathbb{k}} (n_{ik} = n+\mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1)^{n+\mathbb{k}}}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}
 \end{aligned}$$



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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )}$$

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

$$\sum_{n_i = n + k}^n \sum_{(n_i - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n_i + j_s - j_{ik} - k_1)}$$

$$\sum_{(n_{sa} = n_{ik} + j^{sa} - k_2)}^{( )} \sum_{(n_{sa} = n_{sa} + j^{sa} - j_i - k_3)}$$

$$\frac{(n_i + j_{ik} + j_{sa} + j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - k_1 - k_2 - k_3)! \cdot (n + j_i + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i = D + s - 1 \wedge$$

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

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

$$l_{ik} - k_1 + 1 = l_s - j_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

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

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned}
 f_z \mathcal{S}_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \\
 &\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 &\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{sa}+j_{sa}-j_i-k_3)} \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_s=n-j_i+1)} \\
 &\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 &\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 &\sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \\
 &\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)}$$

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

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

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

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_i - j_{sa} - s > 0 \wedge$$

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \cdot 4 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

$$\mathbb{k}_z: s = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \sum_{k=1} \sum_{(j_s=2)}^{(l_{sa}-j_{sa}+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(l_s - 2)!} \cdot \frac{(l_i + j_{ik} - l_{sa} - s)!}{(j^{sa} - l_s - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=1}^{(l_{sa}-j_{sa}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{( )} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\sum_{k=1}^{l_{ik} - j_{sa}^{ik} + 1} \sum_{j_s=2}^{j_s} \sum_{k=j_s+l_{ik}-l_s}^{n} \sum_{j_i=j^{sa}+s-j_{sa}}^{(n_i-j_s+1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_{is}-n_{ik}-1)!} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

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

$$\frac{(l_i)!}{(D + j_i - n - l_i)! \cdot (j_i)!}$$

$$\sum_{i=1}^{(l_{ik} - j_{sa}^{ik})}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$(n_i - j_i - 1)$$

$$\sum_{i=n+l_k}^{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_i + j_{sa} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{i=1}^{(j_s)} \sum_{j_s=j_{ik}+j_{sa}-l_{ik}}^{(j_s)} \sum_{j_{ik}=i}^{(j_i+j_{sa}-s)} \sum_{j_{sa}=j_{ik}+1}^{(j_{sa})} \sum_{j_i=l_i+n-D}^{(j_i)} \sum_{n_i=n+\mathbb{k}}^{(n)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_{is}+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{ik}+1)} \sum_{n_{sa}=n+\mathbb{k}_3-j_{sa}+1}^{(n_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_s)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\begin{aligned}
 & \sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa})} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{sa})} \sum_{j_i=l_{sa}+s-j_{sa}+1}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-k_1+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{n_{sa}+j_s-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\quad)} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{(\quad)} \sum_{j_i=l_i+n-D}^{l_{sa}+s-j_{sa}}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)!}$$

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

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

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

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s > 0 \wedge$$

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

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

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

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^s, \mathbb{k}_2, j_{sa}^s, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k}_1$$

$$\mathbb{k}_z: z = 1 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

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

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

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{i_s}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=n+l_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s - j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(j_s - 2)!} \cdot \\
 & \frac{(l_i + j_s - l_{sa} - s)!}{(j^{sa} - l_s - j_i - l_s - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{(j^{sa}=j_{sa}+1)}^{n} \sum_{j_i=l_{ik}+s-j_{sa}^{ik}+1}^{n} \\
 & \sum_{n_i=n+l_3}^n \sum_{(n_{is}=n+l_3-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_2+l_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_1} \\
 & \sum_{(n_{sa}=n+l_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 1)!} \cdot \\
& \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - 1)! \cdot (j_i + l_i - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{(n)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(n)} \\
& \sum_{k=j^{sa} + l_{ik} - l_{sa}}^{(n)} \sum_{(j^{sa} = j_i + j_{sa} - s)}^{(n)} \sum_{j_i = l_i + n - D}^{l_{ik} + s - j_{sa}^{ik}} \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \\
& \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{(n)} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

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

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{ik}, j_i} &= \sum_{k=1}^{\binom{()}{j_s}} (j_s = j_{ik} + l_s - l_{ik}) \\ &\sum_{j_{ik}=j^{sa}+l_{ik}}^{(j_i - s)} \sum_{(j^{sa}=j_{sa}+1)}^{l_s+s-1} \sum_{j_i=l_i+n-D} \\ &\sum_{n_i=j^{sa}+l_{ik}}^n \sum_{n_{is}=n+l_{ik}-j_s+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ &\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\ &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \end{aligned}$$

$$\begin{aligned}
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_s-l_{ik})}^{( )} \sum_{(l_s+l_{ik})}^{( )} \sum_{(j_{ik}=j^{sa}+l_{ik}-l_{sa})}^{( )} \sum_{(j_s=j_s+1)}^{( )} \sum_{(j_i=l_s+l_{ik})}^{( )} \\
 & \sum_{(n_{is}=n_{is}-j_{ik}-k_1)}^{( )} \sum_{(n_i=n+l_{ik})}^{( )} \sum_{(n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)}^{( )} \sum_{(n_{sa}=n_{sa}+j^{sa}-j_i-k_3)}^{( )} \sum_{(n_s=n-j_i+1)}^{( )} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{(\cdot)} \sum_{j_i=l_i+n}^{l_s+s-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-\mathbb{k}_1}$$

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

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - \mathbb{k}_2 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n_{ik} + j_{sa}^{ik} - j_{sa}^{ik} - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

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

$s: \{j_{sa}^i, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^s, \mathbb{k}_3, j_{sa}^i\} \wedge$

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

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-D}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}
 \end{aligned}$$

$$\frac{\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(l_s - 2)!} \cdot \frac{(l_i + j_i - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

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

$$\sum_{n_i=n+l_{k_1}}^n \sum_{(n_{is}=n+l_{k_2}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_3}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

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

$$\sum_{n_i = n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_{is} + j_s - j_{ik} - \mathbb{k}_1)}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

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

$$\frac{l_i!}{(D + j_i - n - l_i)! \cdot j_i!} +$$

$$\sum_{j_{ik}=0}^{n_{sa}+l_{ik}-l_{sa}} \sum_{(j_{sa}=n+l_{sa}-D-s)}^{(l_{ik}+j_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}}^{(j_s+l_s-l_{ik})}$$

$$\sum_{n+l_k}^{(n_i-j_s)} \sum_{(n_{is}=n+l_k-j_s+1)}^{n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{(n_{sa}=n+l_{k3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

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

$$\sum_{n_i = n + k}^n \sum_{(n_i - j_s + 1)} \sum_{(n_{ik} = n_i + 1)} \sum_{(j_s - j_{ik} - k_1)}$$

$$\sum_{(n_{sa} = n_{ik} - j^{sa} - k_2)} \sum_{(n_{sa} + j^{sa} - j_i - k_3)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - k_2 - k_3)! \cdot (n + j_i + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_s = D - n \wedge$$

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

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

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

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

$$n - l_i \wedge I = k \geq 0 \wedge$$

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

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

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

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} + j_{ik} - \dots)}^{n_{is} + j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{ik} + j_{ik} - \dots)}^{(n_{ik} + j_{ik} - \mathbb{k}_2)} \sum_{(n_{sa} + j_{sa} - \dots)}^{n_{sa} + j_{sa} - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

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

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$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = n + k - j_s + 1)}} \sum_{\substack{n_{i_s} + j_s - j_{ik} - k_1 \\ n_{ik} = n + k_2 + k_3 - j_{ik} + 1}} \\
 & \sum_{\substack{(n_{ik} + j_{ik} - j^{sa} - k_2) \\ (n_{sa} = n + k_3 - j^{sa} + 1)}} \sum_{\substack{n_{sa} + j^{sa} - j_i - k_3 \\ n_s = n - j_i + 1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j_i + j_s - 1)! \cdot (n_{sa} + j_i - j_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{\binom{D}{l_i}} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{\binom{D}{l_i}} \\
 & \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{\substack{(l_s + j_{sa} - 1) \\ (j^{sa} = l_i + n + j_{sa} - D - s)}} \sum_{j_i = j^{sa} + s - j_{sa}} \\
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{i_s} = n + k - j_s + 1)}} \sum_{n_{ik} = n_{i_s} + j_s - j_{ik} - k_1} \\
 & \sum_{\substack{(\cdot) \\ (n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3}
 \end{aligned}$$

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$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

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

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

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

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

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - l_s - s)! \cdot (j_i + l_i - j^{sa} - s)!} \cdot \\
 & \frac{(D - j_i - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(j_s)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(n)} \\
 & \sum_{j_{ik} = l_i + j_{sa} - D - s}^{(j_{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = j^{sa} + s - j_{sa}}^{(n)} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
 \end{aligned}$$

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$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^n (j_s = j_{ik} + l_s)$$

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

$$\sum_{n=n+k}^n (n_{is}=n+j_s+1) \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} (n_i - j_s + 1)$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2} (n_s = n_{sa} + j^{sa} - j_i - k_3)$$

$$\frac{(n_i + j_{sa} + j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

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

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

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

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

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



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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

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

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

$$\sum_{n_i=n_{is}+j_{ik}+1}^n (n_{is}+j_{ik}+1) n_{ik}=n_{is}+j_{ik}+1$$

$$\sum_{(n_{sa}=n_{s_3}-j_{sa}^{ik}+1)}^{(n_{sa}+j_{ik}-j_{sa}-\mathbb{k}_2)} n_{sa}+j_{sa}-j_i-\mathbb{k}_3$$

$$\sum_{n_s=n-j_i+1}^{(n_{sa}+j_{ik}-j_{sa}-\mathbb{k}_2)} (n_{sa}+j_{sa}-j_i-\mathbb{k}_3)$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\begin{aligned}
 & \sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_s)}^{(\quad)} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_s=n-j_i)}^{(n_{sa}+j_{sa}-j_i-k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} + n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)} \sum_{j_i=j^{sa}+s-j_{sa}}^n
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - j_i)!}{(l_s - j_i - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

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

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^s, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 1 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

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

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(j_s - 2)!} \cdot \\
 & \frac{(l_i + j_i - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}
 \end{aligned}$$

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$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - 1)! \cdot (j_i + 1 - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \sum_{j_{ik} = l_i + j_{sa}^{ik} - D - s}^{j_{sa}^{ik} - 1} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{( )} \sum_{j_i = j^{sa} + s - j_{sa}}^{( )} \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{( )} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz \sum_{k=1}^{j_s} \sum_{(j_s=2)}^{(l_i+n-D-s)} = \sum_{j_s+l_{ik}-l_s}^{n} \sum_{(j_{ik}+l_{sa}-l_{ik})}^{n} \sum_{j_i=l_i+n-D}^{n} \sum_{(n_i+l_{ik}-j_{sa}-\mathbb{k}_2)}^{n} \sum_{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)}^{n} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{n} \sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{n} \sum_{(n_s=n-j_i+1)}^{n} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\begin{aligned}
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(l_s - j_{sa} + 1)} \binom{l_s - j_{sa} + 1}{k} \binom{n - j_i - k}{n - j_i - k - s + 1} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_i}^{(j_i)} \binom{j_i}{j_{ik}} \binom{j_i - j_{ik}}{j_i - j_{ik} - s - j_{sa}} \\
 & \sum_{n_i=n+l_{ik}}^n \binom{n}{n_i} \binom{n_i}{n_i - j_{ik} - l_{ik}} \binom{n_i - j_{ik} - l_{ik}}{n_i - j_{ik} - l_{ik} - 1} \\
 & \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_i} \binom{n_i}{n_{ik}} \binom{n_i - n_{ik}}{n_i - n_{ik} - j_{sa} - j_i - l_{k_3}} \\
 & \sum_{(n_{sa}=n_{k_3}-j^{sa}+1)}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \binom{n_{sa}+j^{sa}-j_i-l_{k_3}}{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{( )} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+s-j_{ik}}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-l_{k1}}^{( )}$$

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

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - l_{k2} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n_{ik} + j_{sa}^{ik} - j_{sa}^{ik})! \cdot (n_{is} - j_{ik} - l_{k1} - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

$l_{k1} - j_{sa}^{ik} + 1 \leq l_{k2} \leq l_{sa} - j_{sa}^{ik} - j_{sa} - l_{k1} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

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

$D \geq n < n \wedge I = k \Rightarrow I \wedge$

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

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

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



$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \binom{()}{j_{ik}+l_{sa}-l_{ik}} \sum_{j_i=l_i+n-D}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i-1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

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

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \binom{()}{j_{ik}+l_{sa}-l_{ik}} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{ik} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_s - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(l_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-j_{sa}^{ik}+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{( )} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}}^{( )} \\
 & \sum_{n_i=n+\mathbb{k}_1}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{( )} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}^{( )} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}
 \end{aligned}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=2)} \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=l_i+n-D} \sum_{n_i=n+\mathbb{k}} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\begin{aligned}
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{l_i!}{(D + j_i - n - l_i)! \cdot (j_i)!} + \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_s)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(l_s)} \sum_{j_i=l_i}^{(l_s)} \sum_{j_i=D-s+1}^{(l_s)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n_i-j_s)} \sum_{j_{ik}=j_s+l_{sa}-l_{sa}}^{(n_i-j_s)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(n_i-j_s)} \sum_{j_i=l_i}^{(n_i-j_s)} \\
 & \sum_{n+l_{ik}}^{(n_{is}-n+l_{ik}-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-l_{k_1})} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{(n_{sa}+j^{sa}-j_i-l_{k_3})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}
 \end{aligned}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=l_i+n-D-s+}$$

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

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+}^{(n_i-j_s+} \sum_{(i+1) n_{ik}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n_{ik}+j^{sa}-l_{k_2}-l_{k_3})}^{( )} \sum_{(n_{sa}=n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - j_s - l_{k_2} - l_{k_3})! \cdot (n + j_i + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i = D + s - 1 \wedge$$

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

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

$$l_{ik} - l_{k_2} + 1 = j_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

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

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$l_{k_2}: z = 3 \wedge k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$\begin{aligned}
 f_z \mathcal{S}_{j_s, j_{ik}, j_{sa}, j_i} &= \sum_{k=1}^{(\quad)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\quad)} \\
 &\sum_{j_{ik} = j_{sa}^{ik} + 1}^{j_{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j_{sa} = j_i + l_{sa} - l_i)}^{(\quad)} \sum_{j_i = s + 1}^{l_{ik} + j_{sa}^{ik} - s} \\
 &\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 &\sum_{(n_{ik} + j_{ik} - j_{sa}^{ik} - j_{sa} + j_i - k_3)}^{(n_{ik} + j_{ik} - j_{sa}^{ik} - j_{sa} + j_i - k_3)} \sum_{(n_{sa} = n + k_3 - j_{sa}^{ik} - 1)}^{(n_{sa} = n + k_3 - j_{sa}^{ik} - 1)} \sum_{n_s = n - j_i + 1}^{n_s = n - j_i + 1} \\
 &\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 &\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa}^{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{ik})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_{sa}^{ik} - 1)! \cdot (n_{sa} + j_{sa}^{ik} - n_s - j_i)!} \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=1}^{(\quad)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\quad)} \\
 &\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik}} \sum_{(j_{sa} = j_i + l_{sa} - l_i)}^{(\quad)} \sum_{j_i = l_{ik} + j_{sa}^{ik} - s + 1}^{l_i}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_k+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{s_a} + j^{s_a} - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n + 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})! \cdot (j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{( )} \\
 & \sum_{j_{i_k}=j^{s_a}+j_{s_a}^{i_k}-j_{s_a}}^{( )} \sum_{(j^{s_a}=j_i+l_{s_a}-l_i)}^{( )} \sum_{j_i=s+1}^{l_{i_k}+j_{s_a}^{i_k}-s} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})}^{( )} \sum_{n_s=n_{s_a}+j^{s_a}-j_i-l_{k_3}}
 \end{aligned}$$

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$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{( )} \sum_{j_i = s + 1}^{l_s + s - 1}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$



$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

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

$$\frac{(l_{sa} + j_{sa}^{lk} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (n_{sa} + j_{sa}^{lk} - j_{sa} - l_{sa})!} \cdot$$

$$\frac{(l_s - l_i)!}{(n - l_s) \cdot (n - j_i)!} \cdot$$

$$\sum_{j_s=1}^{l_s} \sum_{j_s=j_{ik}+l_s-l_{ik}}$$

$$\sum_{j_{sa}=1}^{l_s+j_{sa}^{lk}} \binom{l_s}{j_{sa}} \sum_{j_i=l_s+s}^{l_i}$$

$$\sum_{n+l_{k_1}}^{n-l_{k_1}} \binom{n_i-j_s+1}{n_{is}=n+l_{k_1}-j_s+1} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

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

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{j_s=j_{ik}+l_{ik}}^{( )} (j_s - l_{ik})$$

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

$$\sum_{n_i=n+l_{ik}}^{( )} (j_{i+1}) \sum_{n_i=n+l_{ik}-j_s}^{( )} (j_s - l_{ik}) \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}^{( )} (j_s - l_{k1})$$

$$\sum_{n_i=n+l_{ik}+j_{ik}-l_{k2}}^{( )} (j_{i+1}-l_{k2}) \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}^{( )} (j_s - l_{k3})$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$$

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

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

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+lk-j_{ik}+1}^{n_{is}+j_s-l_{ik}-lk_1}$$

$$\sum_{(n_{ik}+j_{ik}-l_{ik_2})}^{(n_{ik}+j_{ik}-l_{ik_2})} \sum_{(j_{sa}+1)}^{n_{sa}+j^{sa}-l_{sa}-lk_3}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}} \sum_{(j_{sa}=l_{ik}+j_{sa}^{ik}-s+1)}^{(l_{sa})} \sum_{j_i=j_{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_{sa}-1)!(n_{is}+j_{sa}-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}+n_{sa}-1)!}{(j_{sa}-j_{ik}-1)!(n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot
 \end{aligned}$$

$$\sum_{k=1}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{ik}+j_{sa}^{ik}-s)} \sum_{(j_{sa}=j_{sa}+1)} \sum_{j_i=j_{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_2: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(l_s+j_{sa}-1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \frac{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \cdot n_{sa}+j^{sa}-j_i-\mathbb{k}_3}{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1) \cdot n_s=n-j_i+1} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - l_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{sa})! \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \\
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_s + j_{sa} - 1} \sum_{(j^{sa} = l_s + j_{sa})}^{(l_{sa})} \sum_{j_i = j^{sa} + l_i - l_{sa}} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
 \end{aligned}$$

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$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{s=1}^n (j_s = j_{ik} + l_s - 1)$$

$$\sum_{j_{ik}=1}^n \sum_{j_{sa}^{ik}=1}^n \sum_{j_{sa}=j_{sa}+1}^n \sum_{j_i=1}^n \sum_{l_i=l_s}$$

$$\sum_{n+l_k}^n (n_{is}=n+l_k - j_s + 1) \sum_{n_{ik}=n_{is}+j_s - j_{ik} - l_{k1}}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k2}}^n \sum_{n_s=n_{sa}+j_{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{sa} + j_{sa}^{ik} - j_{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j_{sa}^{ik} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

- $D > n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$
- $1 \leq j_s \leq j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$
- $j_{ik} - j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$
- $D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$
- $j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + l \wedge$$

$$l_z: z = 3 \wedge l = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{k_1})}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}} \sum_{(j_{sa}=j_{ik}+j_{sa}^{ik})}^{(l_{sa})} \sum_{j_i=j_{sa}^{ik}-l_{sa}}$$

$$\sum_{n_i=n+l_{k_1}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}}$$

$$\frac{(n_{ik}-j_{sa}-l_{k_2}-j_i-l_{k_3})!}{(n_{ik}-j_{sa}-l_{k_2}-j_i-l_{k_3})!} \cdot \frac{(n_{is}-j_s+1)!}{(n_{is}-j_s+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_s-j_{ik}-1)! \cdot (n_i-n_{is}-j_s+1)!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(n_{ik}-j_{ik}-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

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

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}^{ik}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

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$$\sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D}{j_s}} \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{\binom{D}{j_{sa}}} \sum_{j_i=j_{sa}^{ik}+l_i-l_{i_1}}^{\binom{D}{j_i}} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-l_{k_1}}^{\binom{D}{n_{ik}}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-l_{k_2}-l_{k_3}-j_{sa}^{ik})}^{\binom{D}{n_{sa}}} \sum_{n_s=n_{sa}+j_{sa}-j_{sa}^{ik}}^{\binom{D}{n_s}} \frac{(n_i + j_{ik} + j_{sa} - j_{sa}^{ik} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n_{ik} + j_{sa}^{ik} - j_{sa}^{ik} - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(n - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i = 2 + s - n \wedge$$

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

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

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

$$D \geq n < n \wedge I = l_{k_1} = 0 \wedge$$

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

$$s: \{j_{sa}^{ik}, l_{k_1}, j_{sa}^{ik}, l_{k_2}, l_{k_3}, j_{sa}^{ik}\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$z = 2 \wedge k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}^{ik}, j_i} = \sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D}{j_s}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa})} \sum_{j_i=j_{sa}^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}^{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-l_{k_1}} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j_{sa}^{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}^{sa}-l_{ik})! \cdot (j_{sa}^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$\sum_{k=1}^{\sum} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \sum_{j_i=j_{sa}^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}}$$

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

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

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

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

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

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

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{(j_i=j^{sa}+l_i-l_{sa})}^{(l_{sa})}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(l_s - j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - j_{sa}^{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa}^{ik})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{(l_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)} \\
& \sum_{j_{ik}=n+l_{ik}-l_s}^{n} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n_i - j_s + 1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(n_i - j_s + 1)} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i - j_s + 1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{(n_i - j_s + 1)} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\sum_{j_s=1}^{(l_s)} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n_i-j_s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)} \sum_{j_{sa}^{ik}=j_{sa}-1}^{(n_{sa}+j_{sa}^{ik}-j_{sa})} \sum_{j_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(l_s)} \binom{l_s}{j_s=2}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \binom{()}{(j_{sa}=j_{ik}+j_{sa}-j_{sa})}$$

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

$$\sum_{(n_{sa}=n_{ik}+j_{sa}-l_{k_2})} \binom{()}{(n_{sa}+j_{sa}-j_i-l_{k_3})}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

$$l_i \wedge I = k \geq 0 \wedge$$

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

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

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

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{(\quad)} \sum_{j_i = l_i + n - \dots}^{l_{ik} + s - j_{sa}^{ik}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n - j_{ik} + k - k_1}^{n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{(n_{ik} + j_{ik} - j_{sa} - k_2)}^{(\quad)} \sum_{(j^{sa} + 1)}^{n_{sa} + j^{sa} - k_3} \sum_{(j^{sa} + 1)}^{n - j_i + 1}$$

$$\frac{(n_i - n_{is})}{(j_s - 2)! (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\quad)}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_{ik}+s-j_{sa}^{ik}+1}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot
 \end{aligned}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

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

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{( )}$$

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$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} (n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})! / ((n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!)$$

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

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

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

$D \geq n < n \wedge l = k \geq 0 \wedge$

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

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\}$

$s = 4 \wedge s = s + 1 \wedge$

$k : z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})} (n_i - j_s + 1) \sum_{(n_{is}=n+k-j_s+1)}^{( )} \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{( )} \sum_{(j_s=j_{sa}^{ik}+1)}^{( )} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{(j_i=l_i+n-D)}^{( )} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{( )} \sum_{(n_s=n-j_i+1)}^{( )} (n_{ik} + j_{ik} - j^{sa} - k_2) n_{sa} + j^{sa} - j_i - k_3$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - 2)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()} \\
 & \sum_{j_{ik} = j_{sa}^{lk} + 1}^{l_s + j_{sa}^{lk} - 1} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{()} \sum_{j_i = l_s + s}^n \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \\
& \frac{(n_i - l_i - 1)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(n_i-l_i-1)} \sum_{j^{sa}=j_i+l_i-l_{sa}}^{(n_i-l_i-1)} \sum_{j_i=l_i+n-D}^{(n_i-l_i-1)} \\
& \sum_{n+l_k}^{(n_i-l_i-1)} \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-l_i-1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{(n_i-l_i-1)} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_i-l_i-1)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}^{(n_i-l_i-1)} \\
& \frac{(n_i + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - l_i - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$n > n - 1 \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

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

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

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

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

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

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

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

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

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{i=1}^{\binom{()}{j_s=j_{ik}+j_{sa}-l_{ik}}} \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{n_i=n+\mathbb{k}}^{(n_{ik}+1)} \sum_{n_{is}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{is}+1)} \sum_{n_s=n-j_i+1}^{(n_s-1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

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

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j_{sa}^{ik}+1)}^{(n_{ik}+j_{ik}-j_{sa}^{ik})} \sum_{(n_s=n-j_i)}^{(n_{sa}+j_{sa}^{ik}-j_i-l_{k_3})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{ik} + j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} + n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

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

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\ )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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

$$\frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)}$$

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

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

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

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

$D + s - n < l_i \leq D + l_s - n - 1$

$D \geq n < n \wedge I = \mathbb{k} \geq 0$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^s, \mathbb{k}_2, j_{sa}^s, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s + \mathbb{k}_1$

$\mathbb{k}_z: z = \dots \wedge \mathbb{k} = \mathbb{k}_1 + \dots + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\ )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D}{j_s}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=l_s+j_{sa})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_{k_3}}^n \sum_{(n_{is}=n+l_{k_3}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - 1)! \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \\
& \sum_{j_{ik} = j^{sa} + l_i - j_{sa}}^{(n_s + j_{sa} - 1)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{(n_s + j_{sa} - 1)} \sum_{j_i = j^{sa} + l_i - l_{sa}}^{(n_s + j_{sa} - 1)} \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}^{(n_i - j_s + 1)} \\
& \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{( )} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3}^{( )} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$



$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} & \sum_{k=1}^{(\cdot)} S_{j_s, j_{ik}, j_i} = \sum_{k=1}^{(\cdot)} \binom{(\cdot)}{(j_s = j_{ik} + l_s - l_s)} \\ & \sum_{j_{ik} = j_{sa}^{ik} - D - s - 1}^{j_{ik} + j_{sa} - s} \sum_{(j^{sa} = l_i + j_{sa} - D - s)}^{j_i = j^{sa} + l_i - l_{sa}} \\ & \sum_{n_i = n + \mathbb{k} - j_s + 1}^n \sum_{n_{is} = n + \mathbb{k} - j_s + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\ & \sum_{(n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\begin{aligned}
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(j_s)} \sum_{s=1}^{(l_s - l_s)} \sum_{i=1}^{(n - j_s - s)} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-(j^{sa}+j_{sa}-j_{ik})}^{l_{ik}} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(n - j_s - s)} \sum_{n_i=n+l_k}^{(n - n + l_k + 1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{(n_{ik}+1)} \sum_{n_{sa}=n+l_{k_3}-j^{sa}-l_{k_2}}^{(n_{sa}+j^{sa}-j_i-l_{k_3})} \sum_{n_s=n-j_i+1}^{(n_{sa}+l_{k_3}-j^{sa}+1)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\sum_{k=1}^{\binom{D}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{\binom{D}{j_i=j_{sa}+l_i-l_{ik}}} \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-l_{k_1}}^{\binom{D}{n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2}}} \sum_{n_s=n_{sa}+j_{sa}-j_{sa}^{ik}}^{\binom{D}{n_s=n_{sa}+j_{sa}-j_{sa}^{ik}}} \frac{(n_i + j_{ik} + j_{sa} - j_{sa}^{ik} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n_i + j_{ik} + j_{sa} - j_{sa}^{ik} - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s = D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa}^{ik} \wedge l_{sa}^{ik} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + 1 - n < l_i \leq D - l_s + s - 1 \wedge$$

$$\geq n < l_i \wedge l = l_k \Rightarrow$$

$$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$= 4 \wedge s + l_k \wedge$$

$$l_{k_z}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\binom{D}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_i=j_{sa}+l_i-l_{ik}}^{\binom{D}{j_i=j_{sa}+l_i-l_{ik}}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j_{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n+j_{sa}-s)} \sum_{j_i=j_{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}
 \end{aligned}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(l_s - 2)!} \cdot \frac{(l_s + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!}$$

$$\sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{( )} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (\mathbf{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(D + j_{ik} - n - l_i)! \cdot (j_i - l_i)!} + \sum_{k=0}^{(n+l_{sa}-s)} \sum_{l=0}^{(l_{ik}-j_{sa}^{ik}+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(n+l_{sa}-s)} \sum_{j_{ik}=n+l_{sa}-j_s+1}^{(n+l_{sa}-s)} \sum_{j_{sa}=n+l_{sa}-j_s+1}^{(n+l_{sa}-s)} \sum_{j_{sa}=n+l_{sa}-j_s+1}^{(n+l_{sa}-s)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

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$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(l_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_i + n - D - s + 1)}$$

$$\sum_{j_{ik} = j_s + l_{ik} - l_s}^{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})} \sum_{(j_{sa} = j_{sa} - l_{sa})}$$

$$\sum_{n_i = n + k}^n \sum_{(n_i - j_s + 1)} \sum_{(n_{ik} = n_i - j_{ik} - k_1)}$$

$$\sum_{(n_{sa} = n_{ik} + j_{sa} - k_2)}^{(j^{sa} - k_2)} \sum_{(n_{sa} + j_{sa} - j_i - k_3)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - k_1 - k_3) \cdot (n + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq n - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1 \wedge$$

$$D + s - n \wedge I = k \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$



$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_s}^{(n+j_{sa}-s)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{ik}-k_1)}^{(n_{is}+j_{ik}-k_1)}$$

$$\sum_{(n_{ik}+j_{ik}-k_2)}^{(n_{ik}+j_{ik}-k_2)} \sum_{(n_{sa}=n_{ik}+j_{ik}-k_3)}^{(n_{sa}+j_{ik}-k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s)}$$

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$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(n+j_{sa}-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i}$$

$$\frac{(n_i-1)}{(j_s-2)(n_i-n_{is}+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s)(n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{is}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)(n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(n)}^{(n)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}$$

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$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} (n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})! \cdot (n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\}$$

$$s = 4 \wedge s = s + 1 \wedge$$

$$\mathbb{k} : z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_{ik}+s-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{l_{ik}} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \\
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik}} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{( )} \sum_{j_i = l_{ik} + s - j_{sa}^{ik} + 1}^n \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

GUIDANCE

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{j_{ik}=0}^{(n_i - 1)} \sum_{j_{sa}^{ik}=0}^{(j_{sa} - l_i)} \sum_{l_{ik}=0}^{(j_{sa} - l_i - j_{sa}^{ik})} \sum_{j_i=0}^{(n - l_i - j_{sa} - j_{sa}^{ik} - l_{ik})}$$

$$\sum_{n+l_k}^{(n_i - 1)} \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i - 1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{(n_i - 1)}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_i - 1)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}^{(n_i - 1)}$$

$$\frac{(n_i + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - l_i - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$n - l_i > 1 \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\lfloor \frac{j_s}{j_{ik}} \rfloor} \sum_{l_{ik}=0}^{j_s - j_{ik}k} \sum_{j_{sa}=0}^{j_s + j_{sa}^{ik} - j_{sa}} \sum_{j_{ik}=0}^{j_{sa} - l_{ik}} \sum_{j_i=0}^{n - j_s + 1} \sum_{n_{is}=n + \mathbb{k}_1}^{n - j_s + 1} \sum_{n_{ik}=n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{n_{sa}=n + \mathbb{k}_3 - j_{sa} + 1}^{n_{ik} + j_{sa} - j_{sa} - \mathbb{k}_2} \sum_{n_s=n - j_i + 1}^{n_{sa} + j_{sa} - j_i - \mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \\
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_s + j_{sa}^{ik} - 1} \sum_{(j^{sa} = j_i + l_{sa})}^{( )} \sum_{j_i = l_s + s}^n \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + k_2 + \dots + 1)}^{n_{is} + j_s - k_1} \\
 & \frac{(n_{ik} + j_{ik} - j^{sa} - n_{sa} + j^{sa} - j_i - 1)!}{(n_{sa} + k_3 - j_s - 1)! \dots} \cdot \frac{(n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{ik} - n_{ik} - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} - \\
 & \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )}
 \end{aligned}$$

GÜLDÜZMAYA

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{\binom{()}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{l_s+s-1}^{j_i=l_{sa}+n+s-D-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+k-j_s+1}} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}$$

$$\sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{\binom{(n_i+j_{ik}+j_{sa}-j^{sa}-s-k_1-k_2-j_{sa})!}{(n_i-n-k_1-k_2-k_3)! \cdot (n+j_{ik}-j_{sa}-j^{sa}-j_{sa})!}}{\frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \frac{(D-j_s)!}{(D+j_s-n-l_i)! \cdot (n-j_i)!}}$$

$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik}^{ik} \leq j_{ik} \leq j_s + j_{sa}^{ik} - j_{sa}^{ik} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - j_{sa} - j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} > l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$D + j_s - n < l_{sa} \wedge D + l_s + j_{sa} - j_s - 1 < l_{sa}$

$D > n < n \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$j_{sa} - j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 = j_{sa}^{ik} - 1 \wedge$

$\{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s - k_1 \wedge$

$k_2 = s - k_1 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{\binom{(l_{ik}+j_{sa}-j_{sa}^{ik})}{j^{sa}=l_{sa}+n-D}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$



$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j_s - j^{sa} - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n + 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})! \cdot (j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{\binom{()}{j_s = j_{ik} + l_s - l_{ik}}}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik}} \sum_{(j^{sa} = l_{ik} + j_{sa} - j_{sa}^{ik} + 1)}^{(n + j_{sa} - s)} \sum_{j_i = j^{sa} + l_i - l_{sa}} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}
 \end{aligned}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{(l_{ik} + j_{sa} - j_{sa}^{ik})} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{( )} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

GÜLDENWA

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z \rightarrow \sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_{sa}^{ik}=j_{sa}-1} \sum_{j_{sa}=l_{sa}+n-D} \sum_{j_i=j_{sa}^i+l_i-l_{sa}} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\begin{aligned}
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=1}^{l_s+j_{sa}^{ik}-1} \sum_{(j_{sa}=l_s+j_{ik}-j_{sa}-s)}^{(j_{sa}=l_s+j_{ik}-j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(j_i=j^{sa}+l_i-l_{sa})} \\
 & \sum_{n_i=n+l_k}^{(n_i=n+l_k+1)} \sum_{(n_i=n+l_k-j_s+l_{ik}-k_1)}^{(n_i=n+l_k-j_s+l_{ik}-k_1)} \sum_{k=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{(n_i=n+l_k-j_s+l_{ik}-k_1)} \\
 & \sum_{(n_{ik}=n+l_{k_2}-j^{sa}-l_{k_2})}^{(n_{ik}=n+l_{k_2}-j^{sa}-l_{k_2})} \sum_{(n_{sa}=n+l_{k_3}-j^{sa}-l_{k_3})}^{(n_{sa}=n+l_{k_3}-j^{sa}-l_{k_3})} \sum_{n_s=n-j_i+1}^{(n_{sa}=n+l_{k_3}-j^{sa}-l_{k_3})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

GÜLDENYA

$$\sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-1)} \sum_{(j_{sa}=l_{sa}+n-D)} \sum_{j_i=j_{sa}+l_i-l_{ik}}^{(\cdot)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-l_{k_1}}^{(\cdot)}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2})}^{(\cdot)} \sum_{(n_s=n_{sa}+j_{sa}-j_i)}^{(\cdot)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n_{ik} + j_{sa} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s = 2 - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{ik} < j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{k_1} - j_{sa}^{ik} + 1 = l_{k_2} \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + l_{k_1} - n < l_{sa} \leq D + l_s + l_{k_2} - n - 1 \wedge$$

$$l_{k_1} \geq n < l_{k_2} \wedge l_{k_3} = l_{k_1} \wedge l_{k_3} > n \wedge$$

$$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$l_{k_1} = 4 \wedge l_{k_2} = s + l_{k_3} \wedge$$

$$l_{k_2}: z = 3 \wedge l_{k_3} = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1} \sum_{(j_{sa}=l_{sa}+n-D)}^{(n+j_{sa}-s)} \sum_{j_i=j_{sa}^{ik}+l_i-l_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)!(n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)!(j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{ik}} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n+j_{sa}-s)} \sum_{j_i=j_{sa}^{ik}+l_i-l_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} \cdot \\
 & \sum_{k=1}^{l_{ik}} \sum_{\substack{(\ ) \\ (j_s=j_{ik}+l_s-l_{ik})}} \\
 & \sum_{\substack{j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{lk}-D-j_{sa} \\ (j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}} \sum_{\substack{(\ ) \\ j_i=j^{sa}+l_i-l_{sa}}} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}_1}^{\mathbf{n}} \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=\mathbf{n}+\mathbb{k}_2-j_s+1)}} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{\substack{(\ ) \\ (n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}} \sum_{\substack{(\ ) \\ n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{lk})!}{(n_i - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (\mathbf{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{lk})!}
 \end{aligned}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{sa} + j_{sa}^{ik} - D - j_{sa} - 1} \sum_{(j^{sa} = l_{sa} + n - D)}^{(n + j_{sa} - s)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$



$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(n - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_{ik}=l_{sa}+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-1} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(n+l_{sa}-s)}$$

$$\sum_{n+l_k}^{(n_i-j_s)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

GÜLDÜZMAYA

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\ )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ij}+j_{sa}-j_{sa})}^{(\ )} \sum_{(j_{sa}=l_{sa})}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i=n+k)}^{(n_i-j_s+1)} \sum_{(j_s=j_{ik}-k_1)}$$

$$\sum_{(n_{sa}=n_{ik}+j^{sa}-k_2)}^{(\ )} \sum_{(n_{sa}=n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - k_1 - k_2 - k_3) \cdot (n + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \geq 1 \wedge l_s \leq n - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - 1 \leq l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$l_{sa} - n \wedge I = k \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_{sa} + n - D - j_{sa})} \sum_{(j_s=2)}^{(n + j_{sa} - s)} \sum_{j_{ik}=j_s + l_{ik} - l_s}^{(n + j_{sa} - s)} \sum_{(j^{sa}=l_{sa} + n - D)}^{(n + j_{sa} - s)} \sum_{j_i=j^{sa} + l_i - l_s}^{(n + j_{sa} - s)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik_2}+k_2)}^{(n_{is}+j_{ik}-k_1)} \sum_{(n_{ik_3}+k_3)}^{(n_{ik_2}+k_2)} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j_{ik}-k_1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(n_{sa} - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(l_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=l_{sa} + n - D - j_{sa} + 1)}$$

GÜLDÜMÜŞA

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}+n_{sa}-1)!}{(j^{sa}-j_{ik}+1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s+1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=1}^{(l_{ik}-j_{sa}^{lk}+1)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{()} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

GÜLDENWA

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

$$j_{sa} = j_s^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\}$$

$$s = 4 \wedge s = s + 1 \wedge$$

$$k : z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_{sa}+n-D-j_{sa})} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

GUIDANCE

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(l_s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(l_s)} \sum_{j_s=j_s+l_{ik}-l_s}^{(l_s)} \sum_{j_{ik}=j^{sa}+j_{sa}-j_{sa}^{ik}}^{(l_s)}$$

$$\sum_{j_s=j_s+l_{ik}-l_s}^{(l_s)} \sum_{j_{ik}=j^{sa}+j_{sa}-j_{sa}^{ik}}^{(l_s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(l_s)}$$

$$\sum_{j_s=j_s+l_{ik}-l_s}^{(n_i-1)} \sum_{j_{ik}=j^{sa}+j_{sa}-j_{sa}^{ik}}^{(n_i-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(n_i-1)}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n_i-1)} \sum_{(n_s=n_{sa}+j^{sa}-j_i-l_{k_3})}^{(n_i-1)}$$

$$\frac{(n_i + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$j_i \geq n - l_i \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

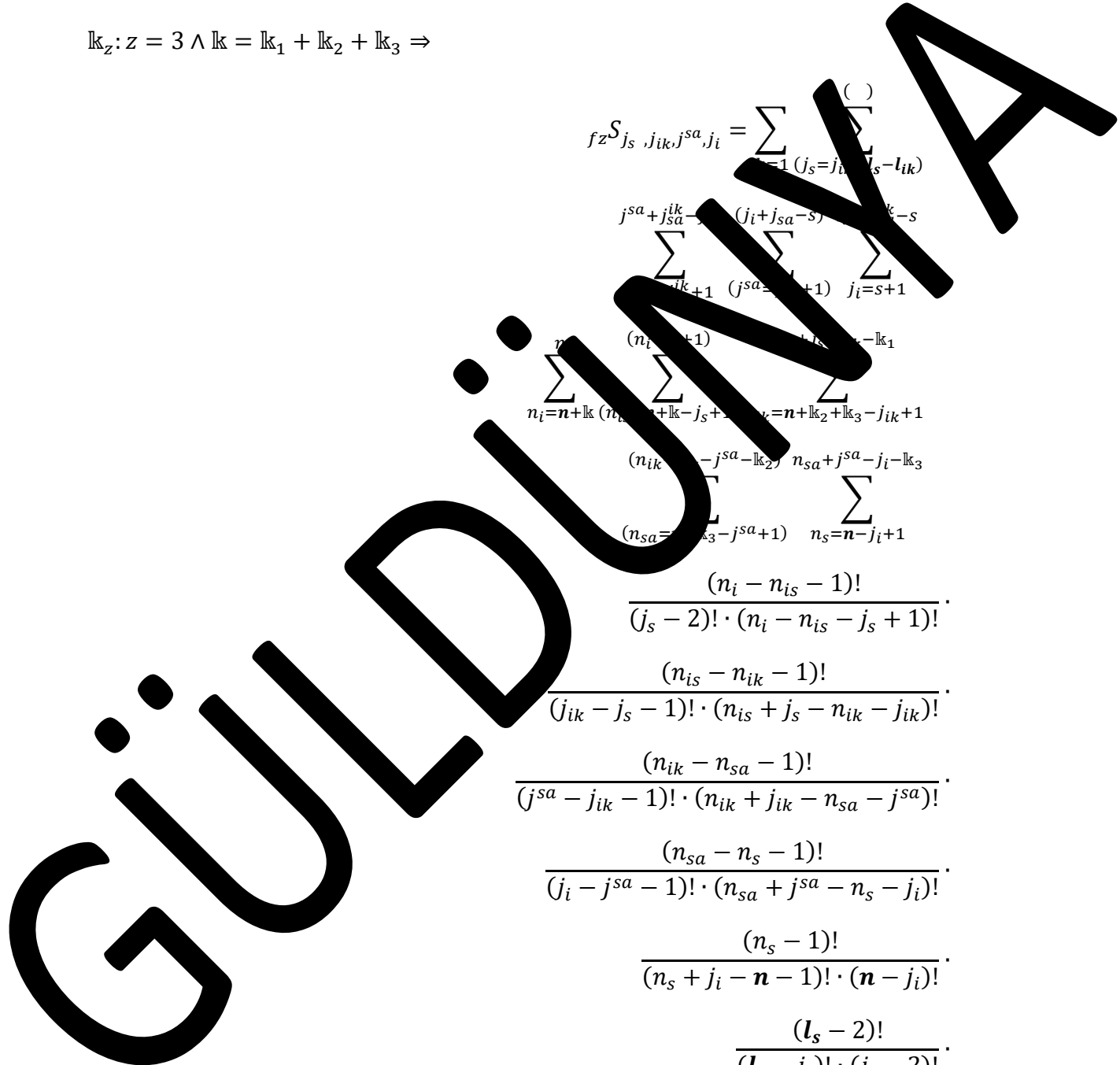
$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{j_s=j_{ik}+1}^{(j_s=j_{ik}+1)} \sum_{j_{sa}=j_{ik}-l_{ik}}^{(j_s=j_{ik}+1)} \sum_{j_i=j_{sa}-s}^{(j_s=j_{ik}+1)} \sum_{j_{sa}=j_{ik}+1}^{(j_s=j_{ik}+1)} \sum_{j_i=s+1}^{(j_s=j_{ik}+1)} \sum_{n_i=n+\mathbb{k}}^{(n_i=n+\mathbb{k})} \sum_{n_{ik}=n+\mathbb{k}-j_s+1}^{(n_i=n+\mathbb{k})} \sum_{n_{sa}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_i=n+\mathbb{k})} \sum_{n_{ik}=n_{sa}+j_{sa}-j_i-\mathbb{k}_3}^{(n_{ik}=n_{sa}+j_{sa}-j_i-\mathbb{k}_3)} \sum_{n_s=n-j_i+1}^{(n_{sa}=n_{ik}-j_{sa}+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$





$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \\
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik}} \sum_{(j^{sa} = j_{sa} + 1)}^{(l_{sa})} \sum_{j_i = j_{sa}^{ik} - s + 1}^{l_i} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + k_2)}^{(n_{is} + j_s - k_1)} \\
 & \frac{(n_{ik} + j_{ik} - j^{sa})! \cdot (n_{sa} + j^{sa} - j_i - k_1)!}{(n_{sa} + k_3 - j_i - k_2)! \cdot (n_{is} - 1)!} \cdot \frac{(n_{is} - 2)! \cdot (n_{is} - j_s + 1)!}{(n_{is} - n_{ik} - 1)!} \\
 & \frac{(n_{is} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}{(n_{ik} - n_{sa} - 1)!} \cdot \frac{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}{(n_{sa} - n_s - 1)!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

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$$\sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\quad)} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{(\quad)} \sum_{j_i=s+l_{ik}+j_{sa}^{ik}-s}^{(\quad)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}^{(\quad)}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2-k_3)}^{(\quad)} \sum_{(n_{sa}=n_{sa}+j^{sa}-j_i)}^{(\quad)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n_i + j_{sa} - j^{sa} - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(n - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_i \leq n + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 \leq l_{sa} + j_{sa}^{ik} - j_{sa} \wedge l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge I = k_1 + k_2 + k_3 = 0 \wedge$

$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^{ik}, k_1, j_{sa}^{ik}, k_2, k_3, j_{sa}^{ik}\} \wedge$

$s = 4 \wedge s = k_1 + k_2 + k_3 \wedge$

$z = 2 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_i+j_{sa}-s)} (j_i+j_{sa}-s) \sum_{j_i=s+1}^{l_s+s-1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(l_{sa})} \sum_{j_i=l_s+s}^{l_i}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i = n + l_k}^n \sum_{(n_{i_s} = n + l_k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + l_{k_2} + l_{k_3} - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - l_{k_1}} \\
 & \sum_{(n_{s_a} = n + l_{k_3} - j^{s_a} + 1)}^{(n_{i_k} + j_{i_k} - j^{s_a} - l_{k_2})} \sum_{n_s = n - j_i + 1}^{n_{s_a} + j^{s_a} - j_i - l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{s_a} + j_i - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})^{j^{s_a} - l_{i_k}} \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(j_s)} \sum_{(j_s = j_{i_k} + l_s - l_{i_k})}^{( )} \\
 & \sum_{j_{i_k} = j^{s_a} + j_{s_a}^{i_k} - j_{s_a}}^{( )} \sum_{(j^{s_a} = j_i + j_{s_a} - s)}^{( )} \sum_{j_i = s+1}^{l_s + s - 1} \\
 & \sum_{n_i = n + l_k}^n \sum_{(n_{i_s} = n + l_k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n_{i_s} + j_s - j_{i_k} - l_{k_1}}
 \end{aligned}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_s - s > l_s \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{ik}+j_{sa}^{ik}-s)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \frac{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \cdot n_{sa}+j^{sa}-j_i-\mathbb{k}_3}{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1) \cdot n_s=n-j_i+1} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - 1)! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_i - l_{sa} - 1)!}{(j^{sa} + l_i - l_{sa} - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + 1 - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{\binom{D}{l_i}} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{\binom{D}{l_i}} \\
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik}} \sum_{(j^{sa} = l_{ik} + j_{sa}^{ik} - s + 1)}^{(l_{sa})} \sum_{j_i = j^{sa} + s - j_{sa}}^{l_i} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa})!}$$

$$\frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_s=1}^{j_{ik}+l_s-l_{ik}}$$

$$\sum_{j_{ik}=j_{sa}}^{l_{ik}+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{sa}+1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(l_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\mathbb{k}} \sum_{(j_s=j_{ik})}^{l_{ik}} \sum_{(j_{sa}=j_{sa}^{ik})}^{l_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=j_{sa}^{ik})}^{l_i} \sum_{(n_i=j_s+1)}^{n_i-j_s+1} \sum_{(n_{is}=n+\mathbb{k}_1-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{n_{ik}+j_{sa}-j_{sa}^{ik}-\mathbb{k}_2} \sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}^{ik}+1)}^{n_{sa}+j_{sa}^{ik}-j_i-\mathbb{k}_3} \sum_{(n_s=n-j_i+1)}^{n_s-1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{ik})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa}^{ik} - 1)! \cdot (n_{sa} + j_{sa}^{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa}^{ik} - l_{ik})! \cdot (j_{sa}^{ik} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$



$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_i)}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_s + j_{sa}^{ik} - 1} \sum_{(j^{sa} = l_s + j_{sa}^{ik} - j_{sa})}^{(l_{sa})} \sum_{(j_i = j^{sa} - j_{sa})}^{l_i}$$

$$\sum_{n_i = n + k}^n \sum_{(n_i - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{is} + j_s - j_{ik} - 1)}^{n_{is} + j_s - j_{ik} - 1} \sum_{(n_{ik} = n + k_3 - j_{ik} + 1)}^{n_{ik} = n + k_3 - j_{ik} + 1}$$

$$\sum_{(n_{ik} + j_s - j^{sa} - k_2)}^{(n_{ik} + j_s - j^{sa} - k_2)} \sum_{(j_i - k_3)}^{j_i - k_3} \sum_{(n_s = n - j_i + 1)}^{(n_s = n - j_i + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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$$\sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D}{j_s}} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-1)} \sum_{(j_{sa}=j_{sa}+1)} \sum_{j_i=j_{sa}+s-j_{sa}} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-l_{k1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k2})}^{\binom{D}{j_s}} \sum_{(n_s=n_{sa}+j_{sa}-j_{sa})} \frac{(n_i + j_{ik} + j_{sa} - j_{sa} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n_{ik} + j_{sa} - j_{sa} - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_i = 0 + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - a + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{sa}^{ik} \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_{k1} - j_{sa}^{ik} + 1 = 0 \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge l = l_{k1} = 0 \wedge$

$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_s^s, l_{k1}, j_{sa}^{ik}, l_{k2}, l_{k3}, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s + l_k \wedge$

$l_k; z = 3 \wedge l_k = l_{k1} + l_{k2} + l_{k3} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D}{j_s}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{lk}+1}^{l_{ik}} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{(l_{sa})} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i} \\
 & \sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+lk_2+lk_3-j_i}^{n_{is}+j_s-j_{ik}-lk_1} \\
 & \sum_{(n_{sa}=n+lk_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-lk_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_{sa}-1)!(n_{is}+j_{sa}-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}+n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=1}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}} \\
 & \sum_{j_{ik}=j_{sa}^{lk}+1}^{l_{ik}} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{\binom{()}{}} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\ )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i - n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_i > l_{ik} \wedge l_{sa} + j_{sa} - s > l_i \wedge$

$D \geq n < n \wedge I = \mathbb{k} >= 0$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{sa} = j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s = 4 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$

$\mathbb{k}_2 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 = 6$

$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\ )}$

$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$

$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k2}) \\ (n_{sa}=n+l_{k3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k3} \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_i - 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot (n - j_i)! \\
 & \frac{(l_s - 2)!}{(j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa} - 1)!} \cdot \frac{(j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{\binom{D}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{\substack{l_s+j_{sa}^{lk}-1 \\ j_{ik}=j_{sa}^{lk}+1}} \sum_{\substack{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}) \\ j_i=j^{sa}+s-j_{sa}}} \\
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+l_k-j_s+1)}} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}} \\
 & \sum_{\substack{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2}) \\ (n_s=n_{sa}+j^{sa}-j_i-l_{k3})}}
 \end{aligned}$$

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$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_{sa})} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(l_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)} \\
 & \sum_{j_{ik}=n+l_{ik}-l_s}^{(j_{ik}+l_{ik}-l_s)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}^{(j_i=j^{sa}+s-j_{sa})} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\sum_{i_{ik}=j_s+l_{ik}-l_s}^{(n_i-j_s)} \sum_{i_{ik}=j_s+l_{ik}-l_s}^{(n_i-j_s)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(n_i-j_s)} \sum_{j_s=1}^{(l_s)} \sum_{j_s=2}^{(l_s)}$$

$$\sum_{n+\mathbb{k}}^{(n_i-j_s)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$



$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{(l_s)} \binom{l_s}{k}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_{sa}}^{(j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})} \sum_{j_i=j_{sa}+s-j_{sa}}^{(j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})}$$

$$\sum_{n_i=n+l_{ik}-l_{sa}}^{(n+l_{ik}-j_{sa}-l_{sa})} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}^{(n+l_{ik}-j_{sa}-l_{sa})}$$

$$\sum_{n_s=n_{ik}+j_{sa}-l_{k2}}^{(n+l_{ik}-j_{sa}-l_{sa})} \sum_{n_s=n_{sa}+j_{sa}-j_i-l_{k3}}^{(n+l_{ik}-j_{sa}-l_{sa})}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D - n + 1 \wedge$$

$$1 \leq j_{ik} \leq j_{ik} - j_{sa}^{ik} \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{sa} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = l_{k1} \geq 0 \wedge$$

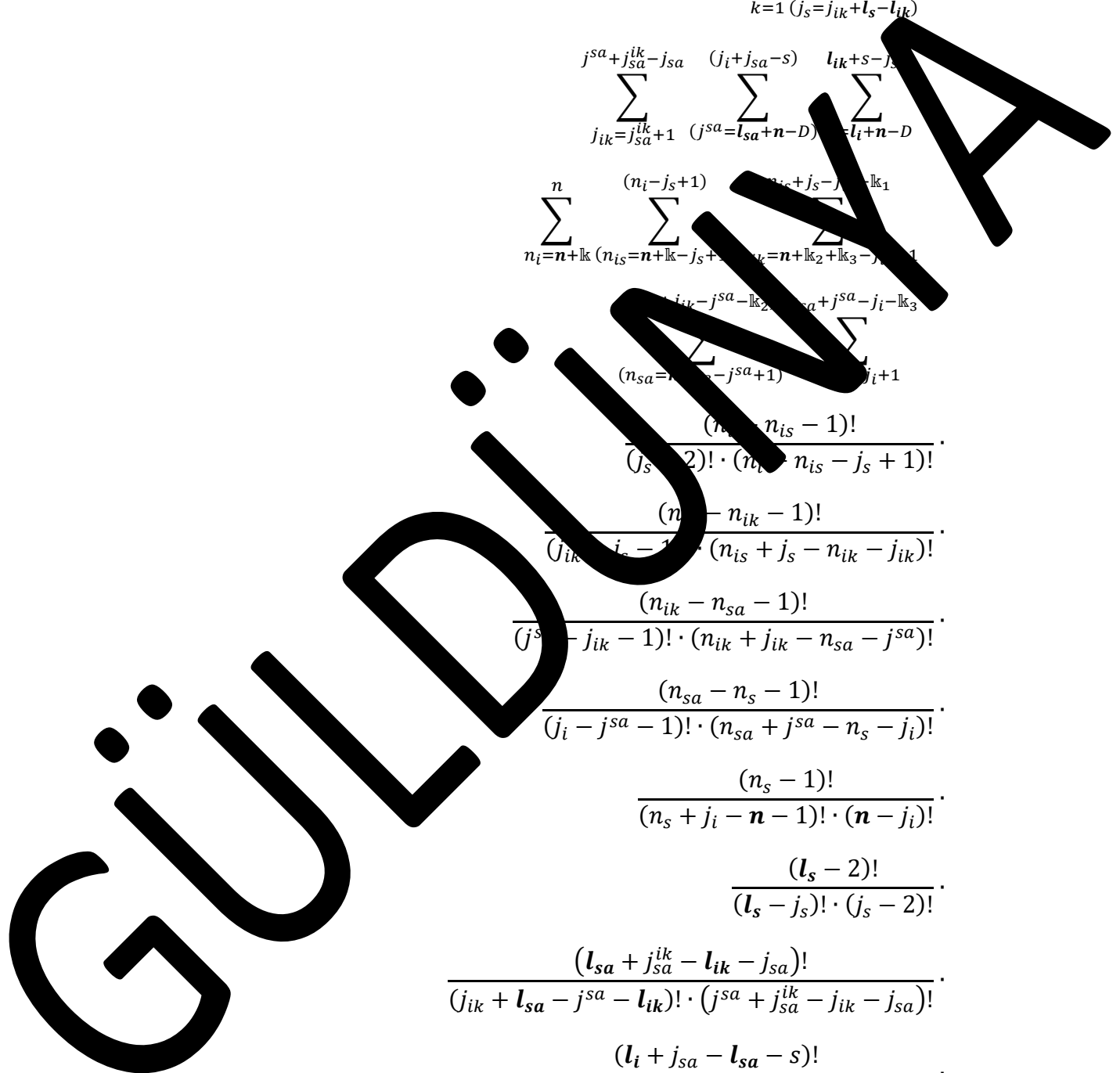
$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k1}, j_{sa}^{ik}, l_{k2}, j_{sa}, l_{k3}, j_{sa}^i\} \wedge$$

$s = 4 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(j_i+j_{sa}-s)} \sum_{(l_{ik}+s-j_s)}^{(l_i+n-D)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+k_2+k_3-j_s+1)}^{(n_{ik}+j_s-j_i-k_1)} \sum_{(n_{sa}=n+k-j_s+1)}^{(n_{ik}-j^{sa}-k_2)} \sum_{(j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)} \frac{(n_{is} - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{ik} - n_{ik} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$



$$\begin{aligned}
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa})} \sum_{j_i=l_{ik}+s-j_{sa}^{ik}}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{sa}+j_{ik}-j_i-k_3)} \sum_{(n_{sa}=n+k_3-j_{ik}+1)}^{(n_{sa}+j_{ik}-j_i-k_3)} \sum_{n_s=n-j_i}^{(n_{sa}+j_{ik}-j_i-k_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} + n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j^{sa} - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}
 \end{aligned}$$

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$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)} \sum_{l_{ik}+s-j_{sa}^{ik}} \sum_{n_i=n+l_k} \sum_{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}} \frac{(n_i+j_{ik}+j_{sa}-j^{sa}-s-l_{k_1}-l_{k_2}-j_{sa})!}{(n_i-n-l_{k_1}-l_{k_2}-l_{k_3})! \cdot (n+j_{ik}+j_{sa}-j^{sa}-s-l_{k_1}-l_{k_2}-j_{sa})!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \frac{(D-l_s)!}{(D+j_{ik}+n-l_i)! \cdot (n-j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$   
 $1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa} - j_{sa}^{ik} \wedge$   
 $j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$   
 $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} > l_{ik} \wedge l_{sa} + j_{sa} - s > l_{sa} \wedge$   
 $D + n - n < l_i \leq D + l_s + s - n - 1 \wedge$   
 $D - n < n \wedge l_s - l_k \geq 0 \wedge$   
 $j_{sa} - j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge$   
 $\{j_{sa}^{ik}, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^{ik}, l_{k_3}\} \wedge$   
 $s = 4 \wedge s = s$   
 $l_{k_2} - l_k = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=j_{sa}^{ik}+1} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=l_i+n-D} \sum_{l_s+s-1}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j_i - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa}) \cdot j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{\substack{l_s+j_{sa}^{ik}-1 \\ j_{ik}=j_{sa}^{ik}+1}} \sum_{\substack{(l_{sa}) \\ j^{sa}=l_{sa}+n-D}} \sum_{\substack{n \\ j_i=l_s+s}} \\
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(j_s - 2)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{lk} - l_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}}^{( )} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{( )} \sum_{j_i=l_i+n-D}^{l_s+s-1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}^{( )}
 \end{aligned}$$

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$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \dots \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\ )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{j_{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j_{sa} = l_{sa} + n - D)}^{(l_i + n + j_{sa} - D - s - 1)} \sum_{j_i = l_i + n - D}^n$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - j_{sa})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_i - l_{sa} - j^{sa})!}{(j^{sa} + l_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{\binom{D}{j_s = j_{ik} + l_s - l_{ik}}} \sum_{\substack{j_{sa} = j_{sa}^{ik} - j_{sa} \\ j_{ik} = j_{sa}^{ik} + 1}} \sum_{\substack{(l_{ik} + j_{sa} - j_{sa}^{ik}) \\ (j^{sa} = l_i + n + j_{sa} - D - s)}} \sum_{j_i = j^{sa} + s - j_{sa}}^n \\
 & \sum_{n_i = n + k}^n \sum_{\substack{(n_i - j_s + 1) \\ (n_{is} = n + k - j_s + 1)}} \sum_{\substack{(n_{is} + j_s - j_{ik} - k_1) \\ (n_{ik} = n + k_2 + k_3 - j_{ik} + 1)}} \\
 & \sum_{\substack{(n_{ik} + j_{ik} - j^{sa} - k_2) \\ (n_{sa} = n + k_3 - j^{sa} + 1)}} \sum_{\substack{(n_{sa} + j^{sa} - j_i - k_3) \\ (n_s = n - j_i + 1)}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - l_s)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot$$

$$\frac{(l_i + j_{sa} - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!} \cdot$$

$$\frac{(n - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{j_s=1}^{l_i} \sum_{j_s=j_{ik}+l_s-l_{ik}}$$

$$\sum_{l_{ik}=j_{sa}^{l_i}}^{l_{ik}} \sum_{l_{ik}=j_{sa}^{l_i}+j_{sa}-j_{sa}^{ik}+1}^{l_{ik}} \sum_{j_i=j_{sa}+s-j_{sa}}^n$$

$$\sum_{n+l_{ik}}^{(n_i-j_s+1)} \sum_{n_{is}=n+l_{ik}-j_s+1}^{n_{is}+j_s-j_{ik}-l_{k1}} \sum_{n_{ik}=n+l_{k2}+l_{k3}-j_{ik}+1}$$

$$\sum_{(n_{sa}=n+l_{k3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - l_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{\infty} \sum_{j_s=j_{ik}+l_s-k}^{\infty} \sum_{j_{sa}=j_{sa}^{ik}-k}^{\infty} \sum_{j_i=j_i^{sa}-k}^{\infty} \sum_{n+k}^n \sum_{n_{is}=n+k}^{\infty} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{\infty} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}^{\infty} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}^{\infty} \frac{(n_i + j_{sa} + j_s - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = k \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(j_s)} \sum_{(j_s - \mathbb{k} + l_s - l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa} (l_i+n+j_{sa}-D-s-1)}$$

$$\sum_{(j_{sa}^{ik}+n-D)}^{(j_{sa}^{ik}+n-D)} \sum_{j_i=l_i}^{(j_{sa}^{ik}+n-D)}$$

$$\sum_{n_i=n}^{(j_{sa}^{ik}+n-D)} \sum_{(n_{is}=n+j_{sa}^{ik}+1)}^{(j_{sa}^{ik}+n-D)} \sum_{n_{ik}=n}^{(j_{sa}^{ik}+n-D)}$$

$$\sum_{(n_{sa}=n-\mathbb{k}_3-j_{sa}+1)}^{(j_{sa}^{ik}+n-D)} \sum_{n_s=n-j_i+1}^{(j_{sa}^{ik}+n-D)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \\
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{j_{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j_{sa} = l_i + n + j_{sa} - D - s)}^{(l_s + j_{sa} - 1)} \sum_{j_{sa}^{sa} + s - j_{sa}}^n \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + \dots + 1}^{n_{is} + j_s - \dots - k_1} \\
 & \frac{(n_{ik} + j_{ik} - j_{sa} - \dots - n_{sa} + j_{sa} - j_i - \dots)}{(n_{sa} + k_3 - \dots - j_i + 1)} \dots \\
 & \frac{(n_{is} - 1)!}{(n_{is} - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{ik} - 1)!}{(n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{k=1}^{\binom{D}{s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=l_s+j_{sa})}^{\binom{l_{sa}}{j^{sa}}} \sum_{j_i=j^{sa}+s-j}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \frac{(n_{ik}+j_{ik}-j^{sa})! \cdot (n_{is}+j_s-j_{ik}-l_{k_1})!}{(n_{sa}=n+l_{k_3}-j_{ik}+1)! \cdot (n_s=n-j_i+1)!} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}+j_s+1)!} \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-n_s-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \\
 & \sum_{k=1}^{\binom{D}{s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}
 \end{aligned}$$

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$$\sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}} \sum_{(l_s+j_{sa}-1)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-lk_2)}^{()} \sum_{(n_s=n_{sa}+j_s-j_i-lk_3)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - lk_1 - lk_2 - j_s)!}{(n_i - n - lk_1 - lk_2 - lk_3)! \cdot (n + j_{ik} - j_{sa} - j^{sa} - j_s - lk_3)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \frac{(D - j_s - 1)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - j_s \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i - j_{sa} - s \wedge j^{sa} - j_{sa} - j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_{sa} + j_{sa} - s > l_{sa} \wedge$

$D + s - n < l_i \leq l_s + s - n = D - n + 1$

$D > n < n \wedge l_s = lk \geq 1$

$j_{sa} - j_{sa}^i - 1 \wedge j_{sa}^{lk} - j_{sa} - 1 = j_{sa}^{ik} - 1 \wedge$

$\{j_{sa}^s, lk_1, j_{sa}^{ik}, lk_2, j_{sa}, lk_3, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s - lk_1$

$lk_2 = s - lk_1 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{()} \sum_{(j_s=j_{ik}+l_s-l_s)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa})} \sum_{j_i=l_i+n-D}^n$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_k+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{s_a} + j^{s_a} - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})! \cdot j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{\binom{()}{}} \sum_{(j_s=j_{i_k}+l_s-l_s)}$$

$$\sum_{j_{i_k}=l_i+n+j_{s_a}^{i_k}-D-s}^{l_{i_k}} \sum_{(j^{s_a}=j_{i_k}+j_{s_a}-j_{s_a}^{i_k})}^{(l_{s_a})} \sum_{j_i=j^{s_a}+s-j_{s_a}}^n$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_k+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

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$$\begin{aligned}
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s - 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot (n - j_i)! \\
 & \frac{(l_s - 2)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}^{( )}
 \end{aligned}$$

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$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \dots \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\ )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_i + n + j_{sa}^{ik} - D - s - 1} \sum_{(j^{sa} = l_{sa} + n - D)}^{(l_{sa})} \sum_{j_i = l_i + n - D}^n$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - j_{sa})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_i - l_{sa} - j^{sa})!}{(j^{sa} + l_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{l_s} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \\
 & \sum_{j_{ik} = l_i + n + j_{sa}^{lk} - D - s}^{l_s + l_i - 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{lk})}^{(l_{sa})} \sum_{j_i = j^{sa} + s - j_{sa}}^n \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_s=1}^{j_s=j_{ik}+l_s-l_{ik}}$$

$$\sum_{j_{ik}=n+j_{sa}^{ik}-j_{ik}+j_{sa}-j_{sa}^{ik}}^{j_{ik}=n+j_{sa}^{ik}-j_{ik}+j_{sa}-j_{sa}^{ik}-1} \sum_{j_i=j^{sa}+s-j_{sa}}^{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{j_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_i+j_s-j_{ik}-l_{k1}}^{n_{ik}=n_i+j_s-j_{ik}-l_{k1}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}^{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(l_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S j_s, j_{ik}, j_{sa}^{ik} = \sum_{j_s=1}^{(D-s)} \sum_{(j_s=2)}^{(D-s)}$$

$$\sum_{j_{ik}=l_{ik}-l_s}^{(n)} \sum_{(j_{sa}+n-D)}^{(n)} \sum_{j_i=l_i+n-D}^{(n)}$$

$$\sum_{n_i=l_i}^{(n)} \sum_{(n_{is}=n+l_s)}^{(n)} \sum_{(n_{ik}=n+l_s+l_{ik}-j_{ik}-\mathbb{k}_1)}^{(n)}$$

$$\sum_{(n_{sa}=n+l_s+l_{sa}-j_{sa}-\mathbb{k}_2)}^{(n)} \sum_{(n_s=n-j_i+1)}^{(n)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{i=l_i+n-j^{sa}+1}^{(l_i + j_{sa}^{ik+1})}$$

$$\sum_{j_{ik}=j_s+l_{ik}} \sum_{j_{sa}=j_{ik}+j_{sa}-j_s} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k} \sum_{n_{i_s}=n+l_k-j_s+l_{k_1}} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{ik}+1}$$

$$\sum_{n_{ik}=n+l_{k_2}-j^{sa}-l_{k_2}} \sum_{n_{sa}=j^{sa}-j_i-l_{k_3}} \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!}$$

$$\frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - n_{i_k} - j_{ik})!}$$

$$\frac{(n_{i_k} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{i_k} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{(l_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_i + n - D - s + 1)}^{(l_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = j_s + l_{ik} - l_s}^{( )} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{( )} \sum_{(j^{sa} + s - j_{sa})}^{( )}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n_{is} + j_s - \mathbb{k}_1)}^{( )}$$

$$\sum_{(n_{is} = n_{ik} + j_s - \mathbb{k}_2)}^{( )} \sum_{(j_s - j_i - \mathbb{k}_3)}^{( )}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n - j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > l_s \wedge l_s \leq D - n - 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} - 1 = l_s \wedge l_{sa}^{ik} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D + s - n < D + j_s + s - n - 1 \wedge$

$D - n > 0 \wedge I = \mathbb{k} \geq 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$\begin{aligned}
 f_{zS}^S j_s, j_{ik}, j^{sa}, j_i &= \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{(l_i+n-D-s)} \\
 &\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_{sa})} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa})} \sum_{j_i=l_i+n-D}^n \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 &\sum_{(n_{sa}=n+k_3-k_1+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{n_{sa}+j_s-j_i-k_3} \\
 &\frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 &\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 &\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 &\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 &\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 &\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 &\sum_{k=1}^{(l_s)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s)}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} (j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}) \sum_{(l_{sa})} \sum_{j_i=j_{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s)!(n_{is}+j_{sa}-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}+n_{sa}-1)!}{(j_{sa}-j_{ik}-1)!(n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s+1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{sa}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=1} \sum_{(l_s)}^{(l_s)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{( )} \sum_{j_i=j_{sa}+s-j_{sa}}
 \end{aligned}$$

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$$\sum_{n_i=n+k}^n \sum_{(n_{i_s}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i - n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s = l_i \wedge$$

$$D \geq n < n \wedge l = k \geq 0$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, k_3, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = k_1 + k_2 + k_3 \wedge$$

$$k_2: k_2 = 3 \wedge k = k_1 + k_2 + k_3 \wedge$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=s+1}^{l_s+s-1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{i_s}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=n+l_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(j_s - 2)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{( )} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_s+s}^{l_i} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_2+l_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_1} \\
 & \sum_{(n_{sa}=n+l_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_s - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\cdot)} \sum_{j_i=s+1}^{l_s+s-1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{(\cdot)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq \mathbf{n} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq \mathbf{n} < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} & \sum_{j_{ik}=j^{sa}+l_{ik}-1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(j_{sa}=j_{sa}+1)} \sum_{j_s=2}^{(j_s-1)} \\ & \sum_{n+\mathbb{k}}^{(n_i-j_s)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_i)!} \cdot \\ & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \end{aligned}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(l_s)} \Delta_{(j_s=z)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_s+j_s)} \sum_{(j_{sa}=l_s+l_{sa}-j_{sa})}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)} \sum_{(n_{is}+j_s-j_{ik})}$$

$$\sum_{(n_{ik}+j_s-j^{sa}-k_2)} \sum_{(j_i-k_3)} \sum_{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{\binom{D}{j_s=j_{ik}-j_{sa}^{ik}+1}} \sum_{j_{ik}=j_{sa}^a+l_{ik}-l_{sa}}^{\binom{l_s+j_{sa}-1}{j_{sa}^a=j_{sa}+1}} \sum_{j_i=j_{sa}^a+l_i-1}^{\binom{n}{n_i=n+l_k}} \sum_{n_{is}=n+l_k-j_s+1}^{\binom{n_i-j_s+1}{n_{ik}=n_{is}}} \sum_{n_{ik}=n_{is}}^{\binom{l_s-j_{ik}-l_{k_1}}{n_{sa}=n_{ik}+j_{ik}-j_{sa}^a-1}} \sum_{n_s=n_{sa}+j_{sa}^a-j_i}^{\binom{l_s-j_{sa}^a-1}{n_s=n_{sa}+j_{sa}^a-j_i}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa}^a - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n_i + j_{ik} + j_{sa}^a - j_{sa}^a - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_i = 2 + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^a - 1 \leq j_{ik} \leq j_{sa}^a + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^a - j_{sa}^{ik} \leq j_{sa}^a \leq j_i + j_{sa} - s \wedge j_{sa}^a - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > 0 \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = l_{k_1} = 0 \wedge$

$j_{sa} = j_{sa}^a - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_s^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, l_{k_3}, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s + l_k \wedge$

$z = 2 \wedge k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\binom{j_{ik}-j_{sa}^{ik}+1}{j_s=2}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \binom{(\quad)}{\quad} \sum_{j_i=j_{sa}^{sa}+l_i-l_{ik}} \\
 & \sum_{n_i=n+l_k}^n \binom{(n_i-j_s+1)}{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}}^{l_{ik}} \binom{(\quad)}{\quad} \sum_{j_i=j_{sa}^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \binom{(n_i-j_s+1)}{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - 1)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(l_s - 2)!} \cdot \frac{(l_s - 2)!}{(j_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\sum_{k=1}^{l_s} \sum_{(j_s, j_{ik}, j^{sa}, j_i)} = \sum_{k=1}^{l_s} \sum_{(j_s, j_{ik}, j^{sa}, j_i)} \sum_{k=j_s+j_{sa}^{ik}-1}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \sum_{n_i=n+\mathbb{k}} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

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$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{j_s=1}^{(l_s)} \sum_{j_s=2}^{(l_s)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(j_s)} \sum_{j_{ik}=j_s+l_{sa}-l_{ik}}^{(j_s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(j_s)} \sum_{n_i=n+l_k}^{(n_i-1)} \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{(n_i-1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n_i-1)} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}^{(n_i-1)} \frac{(n_i + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\begin{aligned} & \geq n - 1 \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \\ & D + s - n < l_i \leq D + l_s + s - n - 1 \wedge \end{aligned}$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{l=1}^{\mathbb{k}-j_{sa}^{ik}+1} \sum_{j=2}^{\mathbb{k}-j_{sa}^{ik}+1} \sum_{j_{ik}=j_{sa}^{ik}}^{(j_{sa}=j_i+l, l_i)} \sum_{j_i=l_i+n-D}^{(j_i=l_i+n-D)} \sum_{n_i=n+\mathbb{k}}^{(n_i=n+\mathbb{k}+1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_{is}=n+\mathbb{k}-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)} \sum_{n_{sa}=n-j_i+1}^{(n_{sa}=n-j_i+1)} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\begin{aligned}
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{( )} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_s+s}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{n_{sa}+j_{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{( )} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_i+n-D}^{l_s+s-1}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i - n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s = \quad \wedge$$

$$D + s - n < l_i \leq D + l_s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$$

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^s, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k}_z$$

$$\mathbb{k}_z: z = \quad \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_i-n_{is}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{is}-j^{sa})!} \cdot \frac{(n_s-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{is}+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n-j_i-1)!} \cdot \frac{(l_s-2)!}{(j_s-2)!} \cdot \frac{(l_{ik}-j_{ik}-j_{sa}^{ik}+1)!}{(j_s+j_{ik}-j_{sa}^{ik}-l_{ik})! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_s+j_{sa})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot$$

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$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_s - 1)! \cdot (j_{ik} - j_s - j_{sa} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}-j_{sa}+1)}^{( )} \\
 & \sum_{j_{ik}=j^{sa}-l_{ik}-l_{sa}}^{(l_s+j_{sa}-1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{( )} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{( )} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{( )} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}^{( )} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

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$$fz^S j_s, j_{sa}, j_i = \sum_{k=1}^{j_{ik} - j_{sa}^{ik} + 1} \sum_{(j_s=2)}^{l_s + j_{sa}^{ik} - 1} \sum_{(j_s+1)}^{n} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$



$$\begin{aligned}
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=0}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
& \sum_{j_{ik}=l_s+j_{sa}^{ik}-s}^{n+j_{sa}^{ik}-s} \sum_{j_{sa}^{sa}=j_{ik}+l_{sa}-j_{sa}^{sa}}^{(n_{sa}+1)} \sum_{j_i=j_{sa}^{sa}+l_i-l_{sa}}^{(n_{sa}+1)} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{sa}=1)}^{(n_{sa}+1)} \sum_{k=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{(n_{sa}+1)} \\
& \sum_{(n_{sa}=1)}^{(n_{sa}+1)} \sum_{(n_{sa}=1)}^{(n_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_{sa}+1)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\sum_{k=1}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\ )} \sum_{j_i=j^{sa}+l_i}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{(\ )} \sum_{(n_{sa}+j^{sa}-j_i)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - k_1 - k_2 - k_3 + j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n_i + j_{sa} - j^{sa} - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq n - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} + j_i + j_{sa} - s \wedge j^{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > 0 \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + n - n < l_i \leq D - l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \Rightarrow \wedge$$

$$j_{sa} = j_i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^s, k_2, j_{sa}^s, k_3, j_{sa}^i\} \wedge$$

$$= 4 \wedge j_{sa}^s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{n+j_{sa}^{ik}-s} \binom{(\quad)}{\quad} \sum_{j_i=j_{sa}^{ik}+l_i-l_{sa}} \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{n_{sa}=n+l_{k_3}-j_{sa}^{ik}+1}^{(n_{ik}+j_{ik}-j_{sa}^{ik}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}^{ik}-j_i-1} \frac{(n_i-1)!}{(j_s-2)! (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)! (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}^{ik}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j_{sa}^{ik})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}^{ik}-1)! (n_{sa}+j_{sa}^{ik}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \sum_{k=1}^{(l_s)} \sum_{j_s=l_i+n-D-s+1}^{(l_s)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{n+j_{sa}^{ik}-s} \binom{(\quad)}{\quad} \sum_{j_i=j_{sa}^{ik}+l_i-l_{sa}} \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_{is} + j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} \cdot \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_s)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\cdot)} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(\cdot)} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}_1}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}_1-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\cdot)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (\mathbf{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}
 \end{aligned}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{(j_s - 1)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(j_s - 1)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(l_s + s - 1)} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{(n)}$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_{is} + j_s - j_{ik} - \mathbb{k}_1)}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_s - 1)!}{(D + j_i - n - l_i)! \cdot (j_i - 1)!} +$$

$$\sum_{j=1}^{(l_s)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(j_{ik})} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(j^{sa})} \sum_{j_i=l_s+s}^n$$

$$\sum_{n+l_k}^{(n_i-j_s)} \sum_{(n_{is}=n+l_k-j_s+1)}^{n_{is}+j_s-j_{ik}-l_{k1}} \sum_{n_{ik}=n+l_{k2}+l_{k3}-j_{ik}+1}$$

$$\sum_{(n_{sa}=n+l_{k3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1, \dots)}$$

$$\sum_{j_{ik} = j_{sa} + l_{ik} - l_{sa}}^{( )} \sum_{(j_{sa} = j_i + l_s - l_i)}^{( )} \sum_{j_i = \dots}^{l_s - 1} \dots$$

$$\sum_{n_i = n + k}^n \sum_{(n_i - j_s + 1)}^{(n_i - j_s + 1)} \dots \sum_{n_{ik} = \dots}^{(n_i - j_s + 1)} \dots$$

$$\sum_{(n_{sa} = n_{ik} + \dots - j_{sa} - k_2)}^{( )} \dots \sum_{(n_{sa} + j_{sa} - j_i - k_3)}^{( )} \dots$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - k_1 - k_2 - k_3) \cdot (n + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq 1 \wedge l_s \leq n - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_{sa} + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - 1 \wedge l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$l_i \wedge I = k \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-1)} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+\mathbb{k}-j_{ik}+\mathbb{k}_1}^{n_{is}+j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(j^{sa}+1)}^{n_{sa}+j^{sa}-\mathbb{k}_3}$$

$$\sum_{(j^{sa}+1)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(n-n_j+1)}^{(n_{sa}+j^{sa}-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(n_{is} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(n_{is} - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_s+j_{sa})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=1}^{\binom{D}{k}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{\binom{D}{k}} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_s)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$

$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$

$D \geq n < n \wedge l = k \geq 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\}$

$s = 4 \wedge s = s + 1 \wedge$

$k : z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - l_s - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + l_i)!}{(D + n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k1}} \\
 & \sum_{(n_{sa}=n+l_k-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_{ik}=l_{sa}+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-1} \sum_{j_s=j_{sa}+l_i-l_{sa}}^{j_{ik}+l_{sa}-l_{ik}} \sum_{j_i=j_{sa}+l_i-l_{sa}}^{j_{sa}^{ik}+1}$$

$$\sum_{n_i=n+l_k}^{(n_i-1)} \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{(n_i-1)}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n_i-1)} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}^{(n_i-1)}$$

$$\frac{(n_i + l_{k_1} + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(l_{sa} + j_{sa} - D - j_{sa})} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-s}^{n+j_{sa}^{ik}-s} \sum_{j_i=n+l_{sa}+j_{sa}^{ik}-D-j_{sa}}^{(n+l_{sa}+j_{sa}^{ik}-D-j_{sa})} \sum_{j_{sa}=n+l_{sa}+j_{sa}^{ik}-D-j_{sa}}^{(n+l_{sa}+j_{sa}^{ik}-D-j_{sa})} \sum_{n_{is}=n+l_{sa}+j_{sa}^{ik}-D-j_{sa}}^{(n+l_{sa}+j_{sa}^{ik}-D-j_{sa})} \sum_{n_{ik}=n+l_{sa}+j_{sa}^{ik}-D-j_{sa}}^{(n+l_{sa}+j_{sa}^{ik}-D-j_{sa})} \sum_{n_s=n+l_{sa}+j_{sa}^{ik}-D-j_{sa}}^{(n+l_{sa}+j_{sa}^{ik}-D-j_{sa})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_{i^{sa}}=j_{sa}+l_i-l_{sa}}^{( )} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-k_1} \\
 & \frac{(n_{ik}+j_{ik}-j^{sa}-n_{sa}+j^{sa}-j_i-1)!}{(n_{sa}+k_3-j_s-1)! \cdot (n_{is}-1)!} \cdot \frac{(n_{is}-2)! \cdot (n_{is}-j_s+1)!}{(n_{ik}-1)!} \\
 & \frac{(n_{is}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}{(n_{ik}-n_{sa}-1)!} \cdot \frac{(n_{ik}+j_{ik}-n_{sa}-j^{sa})!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_{sa}-n_s-1)!}{(n_s-1)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} - \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s)}
 \end{aligned}$$

GÜLDENREYNA

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{is}=n+\mathbb{k}-j_s+1}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}$$

$$\sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}} \sum_{n_s=n_{sa}+j_i-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - j_i - \mathbb{k}_3)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \frac{(D - j_s - 1)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik} - j_{sa}^{ik} \leq j_{ik} \leq j_s + j_{sa}^{ik} - j_i \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - j_{sa} - j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - j_i - 1$$

$$D \geq n < n \wedge l_s = \mathbb{k} > = 1 \wedge$$

$$j_{sa}^{i} - j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa}^{i} - 1 = j_{sa}^{ik} - 1 \wedge$$

$$\{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s - 1 \wedge$$

$$\mathbb{k}_2 = j_s \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{\binom{()}{j_s=2}}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{()}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{j_i=l_{ik}+s+n-D-j_{sa}^{ik}}^{l_s+s-1}$$

$$\begin{aligned}
 & \sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-k_1 \\ n_{ik}=n+k_2+k_3-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_s - j^{sa} - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n + 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{( )} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_s+s}^n$$

$$\begin{aligned}
 & \sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-k_1 \\ n_{ik}=n+k_2+k_3-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}}
 \end{aligned}$$

GÜLDÜZÜMÜ



$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - l_s - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{( )} \\
 & \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{( )} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{( )} \sum_{j_i = l_{ik} + s + n - D - j_{sa}^{ik}}^{l_s + s - 1} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{( )} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

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$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned}
 & \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{(j_{ik} - j_{sa}^{ik} + 1)} \\
 & \sum_{(l_s+1)}^{(l_s+1)-1} \sum_{(j_{ik}=j_{sa}^{ik} - l_{sa} + (j_{sa}^{ik} - l_{ik} + n + j_{sa} - D - j_{sa}^{ik}))}^{(j_{ik}=j_{sa}^{ik} + l_i - l_{sa})} \\
 & \sum_{i=n+\mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_{is} - n_{ik} - 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
 \end{aligned}$$

$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(l_s)} \sum_{j_s=0}^{(l_s - k)} \sum_{j_{ik}=0}^{(n + j_{sa} - s)} \sum_{j_{sa}=l_s + j_{sa}}^{(n + j_{sa} - s)} \sum_{j_i=0}^{(l_i - l_{sa})} \\
 & \sum_{j_{ik}=0}^{(n - j_s + 1)} \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \\
 & \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \\
 & \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \\
 & \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{( )} \sum_{j_{ik} = j_{sa}^{sa} + l_{ik} - l_{sa}}^{(l_s + j_{sa} - 1)} \sum_{(j_{sa} = l_{ik} + n + j_{sa} - D - j_{sa}^{ik})}^{( )} j_{i_{sa} + l_i - l_{sa}} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - \mathbb{k}_1}^{( )} \sum_{(n_{is} = n_{ik} + j_s - \mathbb{k}_2)}^{( )} \sum_{(n_{is} = n_{ik} + j_s - \mathbb{k}_3)}^{( )} \frac{(n_i + j_{ik} + j_{sa} - j_{sa}^{sa} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n_i + j_{ik} + j_{sa} - j_{sa}^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} - 1 > l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n - l_i \leq D - l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D - n = 1 \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+l_i-}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}=n+l_{k_3}-j^{sa}-1)}^{(n_{sa}=n+l_{k_3}-j^{sa}-1)} \sum_{n_s=n-j_i-}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_i - n_{ik} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}-s}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!}$$

$$\frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!}$$

$$\frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{s_a} - j^{s_a})!}$$

$$\frac{(n_{s_a} - 1)!}{(j^{s_a} - 1)! \cdot (n_{s_a} + j^{s_a} - j_i)!}$$

$$\frac{(n_s - 1)!}{(n + j_i - n_s - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s + j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{\binom{()}{j_s=j_{i_k}-j_{s_a}^{i_k}+1}}$$

$$\sum_{j_{i_k}=l_{i_k}+n-D}^{l_s+j_{s_a}^{i_k}-1} \sum_{(j^{s_a}=j_{i_k}+l_{s_a}-l_{i_k})}^{\binom{()}{j_i=j^{s_a}+l_i-l_{s_a}}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})}^{\binom{()}{n_s=n_{s_a}+j^{s_a}-j_i-l_{k_3}}}$$

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$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_{ik} + n - D - j_{sa}^{ik})} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_s - l_{ik} - j_{sa}^{ik} + 1)! \cdot (j_{ik} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s)} \\
 & \sum_{j_i=j_s+j_{sa}^{ik}-1}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
 \end{aligned}$$

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$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{(l_s)} \sum_{l_{ik}=l_{ik}+n-D-j_{sa}^{ik}}$$

$$\sum_{j_{ik}=j_s+1}^{(j_s+1)} \sum_{(j_{sa}^{ik}=j_{sa}^{ik}+l_{sa}-l_{ik})} \sum_{(j_i=j_i+l_i-l_{sa})}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_k+j_s+1)}^{(j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k2}} \sum_{n_s=n_{sa}+j_{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{sa} + j_{sa} - j_{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_k \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{j_{ik}=j_{sa}^{sa}+l_{ik}-l_{sa}}^{(j_i+j_{sa})} \sum_{i_{sa}+1}^{l_s+s-1} \sum_{n_i=n+l_{ik}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n+l_{ik}-j_s+1}^{n_{is}+j_s-j_{ik}} \sum_{(n_{ik}-j_{sa}-l_{ik})}^{(n_{ik}-j_{sa}-l_{ik})} \sum_{(n_s=n+l_{ik}-j_s+1)}^{(n_s=n+l_{ik}-j_s+1)} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\begin{aligned}
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa})} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{sa})} \sum_{j_i=l_s+s}^{l_i} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k-j_2-j_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k1}} \\
 & \sum_{(n_{sa}=n+l_{k3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{n_{sa}+j_{sa}-j_i-l_{k3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}
 \end{aligned}$$

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$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)} \sum_{j_i=s+1}^{l_s+s-1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{ik}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j_s-j_i-k_3}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_s)!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - j_{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - 2)! \cdot (j_s - 2)!}$$

$$\frac{(D + j_s - n - l_i)! \cdot (n - j_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik} - 1 < j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge j^{sa} - j_{sa} - s \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge I = 0 \wedge I = 0$

$j_{sa}^i = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{k_1, j_{sa}^{ik}, k_2, j_s, k_3, j_{sa}^i\}$

$z = 4 \wedge z = s + k \wedge$

$k_z: z = 3 \wedge k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{ik})!} \cdot \\
 & \frac{(n_{i_k} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{i_k} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j_i - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{(l_{sa}) \\ (j^{sa}=l_s+j_{sa})}} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}}$$

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$$\begin{aligned}
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_i + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-1)} \sum_{(j^{sa}=j_{sa}+1)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}^{( )}
 \end{aligned}$$

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$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s) \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s) \cdot (j_{ik} - j_s - j^{sa} + 1)!} \cdot \\
& \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - l_{sa} - s) \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i - 1)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
& \sum_{k=l_s+j_{sa}}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
& \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
\end{aligned}$$



$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}} \sum_{(j^{sa}+j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{=n+l_k}^{(n_i-1)} \sum_{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i + l_{k_1} + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n_{ik} - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S j_s, j_{ik}, j_{sa}, j_i = \sum_{k=0}^{(l_s)} \sum_{(j_s=2)}^{(l_s)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}}^{l_{ik}} \sum_{j_{sa}=j_{ik}+l_{sa}}^{(n_{ik}-j_{sa}-1)} \sum_{j_i=j_{sa}+s-j_{sa}}^{(n_{ik}-j_{sa}-1)}$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_{ik}+1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_{ik}+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{ik}+1)}$$

$$\sum_{(n_{ik}+j_{sa}-l_{s_2})}^{(n_{ik}+j_{sa}-l_{s_2})} \sum_{n_{sa}=j_{sa}-j_i-l_{s_3}}^{(n_{sa}+j_{sa}-j_i-l_{s_3})}$$

$$\sum_{(n_{sa}=1)}^{(n_{sa}+j_{sa}-j_i-l_{s_3})} \sum_{n_s=n-j_i+1}^{(n_{sa}+j_{sa}-j_i-l_{s_3})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{(j^{sa}+s-j_{sa})}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+1-k_1)}^{( )}$$

$$\sum_{(n_{sa}=n_{ik}+1)}^{( )} \sum_{(j^{sa}=k_2)}^{( )} \sum_{(n_{sa}-j_i-k_3)}^{( )}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n_i + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n - 1 \wedge$$

$$1 < j_s \leq j_{ik} + j_{sa}^{ik} + 1 \wedge j_{ik} + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{ik} \leq j_i + j_{sa} \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n - 1 \leq D + j_i + s - n - 1 \wedge$$

$$D > n \wedge I = k \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \cdot \{j_{sa}^{ik}, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned}
 f_{z^S} S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)} \\
 &\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(j_i+j_{sa}-s)} \sum_{(j^{sa}=l_{sa}+n-D)}^{(j_i+j_{sa}-s)} \sum_{j_i=l_i+n}^{l_s+s-1} \\
 &\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n+l_{k_3}-j_{ik}+1)}^{n_{ik}+j_{ik}-j^{sa}} \sum_{(n_s=n-j_i)}^{n_{sa}+j_{ik}-j_i-l_{k_3}} \\
 &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 &\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa})} \sum_{j_i=l_s+s}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i-1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \sum_{k=1}^{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}} \sum_{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}} \sum_{j_i=l_i+n-D}^{l_s+s-1}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\ )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i - n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s > l_s \wedge$

$D + s - n < l_i \leq D + l_s - n - 1 \wedge$

$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^s, \mathbb{k}_2, j_{sa}^s, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s + \mathbb{k}$

$\mathbb{k}_z: z = 1 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_i + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot (n - j_i)! \\
 & \frac{(l_s - 2)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^n \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{n} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i - l_{sa} - l_{sa} - s)!}{(j_s + l_i - j_i - l_s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa})} \sum_{(j^{sa}=l_s+j_{sa})}^{(l_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j^{sa} - 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j^{sa} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - l_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{ik}-l_{sa}}^{(l_s+j_{sa}-1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S j_s, j_{sa}^{ik}, j_i = \sum_{k=1}^{j_{ik} - j_{sa}^{ik} + 1} \sum_{(j_s=2)}^{n} \sum_{j_{ik} = l_i + n - D}^{l_i + n + j_{sa}^{ik} - D - s} \sum_{(j_s=1)}^{n} \sum_{(j_i = j_{ik} + l_{sa} - l_{ik})}^{n} \sum_{j_i = l_i + n - D}^{n} \sum_{n_i = n + \mathbb{k} - j_s + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\begin{aligned}
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - l_i)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{n} \\
 & \sum_{(j_{ik}=l_i+n+j_{sa}^{ik}-s)}^{l_s+j_{sa}^{ik}-1} \sum_{(j_i=j_i+s-j_{sa})}^{n} \\
 & \sum_{(n_{is}=n+l_k-1)}^{(n_{is}+1)} \sum_{(n_{ik}=n+l_k+j_s-j_{ik}-l_k)}^{n_{is}+j_s-j_{ik}-l_k} \\
 & \sum_{(n_{sa}=n+l_k-j^{sa}-l_k)}^{(n_{sa}+j^{sa}-j_i-l_k)} \sum_{(n_s=n-j_i+1)}^{n_{sa}+j^{sa}-j_i-l_k} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{j_s=0}^{n-j_{sa}} \sum_{j_{ik}=l_s+j_{sa}}^{l_{ik}} \sum_{j^{sa}=j_{ik}+l_{sa}}^{( )} \sum_{j_i=j^{sa}-j_{sa}}^{n-j_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n_{ik}-j_{sa}+1}^{n_{is}+j_s-j_{ik}} \\
 & \frac{(n_{ik}-j^{sa}-k_2)!}{(n_{ik}-j^{sa}-k_2)!} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(n_{ik} - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -
 \end{aligned}$$

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$$\sum_{k=1}^{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-1} \sum_{j^{sa}=j_{ik}+l_{sa}-l_{ik}}^{\binom{()}{j_i=j^{sa}+s-1}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}-k_1}^{\binom{()}{j_i=j^{sa}+s-1}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{\binom{()}{j_i=j^{sa}+s-1}} \sum_{j_i=n_{sa}+j^{sa}-j_i}^{\binom{()}{j_i=j^{sa}+s-1}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - k_1 - k_2 - k_3 + j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n_i + j_{sa} - j^{sa} - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq n - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + n - n < l_i \leq D - l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq n - n + 1 \wedge$$

$$j_{sa} = j_i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^s, k_2, j_{sa}^s, k_3, j_{sa}^i\} \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{\binom{l_i+n-D-s}{j_s=2}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=l_i+n-D}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+l_k-j_s+1}} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}{n_{sa}=n+l_{k_3}-j^{sa}+1}} \sum_{\binom{n_{sa}+j^{sa}-j_i}{n_s=j_i-1}} \\
 & \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1) \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1) \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{\binom{(l_s)}{j_s=l_i+n-D-s+1}} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+s-j_{sa}}^n
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j_i - j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^l \sum_{(j_s=l_i+n-D-s+1)}^{(l_s)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$

$D \geq n < n \wedge I = k \geq 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=s+1}^{l_s+s-1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$



$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(n_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa}^{ik} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_s+s}^{l_i} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{j_{ik}=j_s}^n \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{(n_i-j_s+1)} \sum_{j^{sa}=j_i+l_{sa}-l_i}^{(n_{is}=n+l_{ik}-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{l_s+s-1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n_s=n_{sa}+j^{sa}-j_i-l_{k_3})} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}^{sa}, j_i} = \sum_{k=1}^j \sum_{(j_s=j_{sa}^{ik}+1)} \frac{(j_s - j_{sa}^{ik} + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\begin{aligned}
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{j_s=2}^{\Delta} \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}} \sum_{(j^{sa}=l_s+j_{sa}^{ik}-j_{sa})}^{(l_{sa})} \sum_{(n_i=n+l_k)}^n \sum_{(n_{is}=n+l_k)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+l_k-j_{ik}+1)}^{(n_{is}+j_s-j_{ik}-l_{ik})} \sum_{(n_{ik}+j_{sa}-l_{k2})}^{(n_{ik}+j_{sa}-l_{k2})} \sum_{(n_s=n-j_i+1)}^{(n_s=n+l_k-j_{ik}+1)} \sum_{(n_s=n-j_i+1)}^{(n_s=n+l_k-j_{ik}+1)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -
 \end{aligned}$$

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$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-1)} \sum_{(j_{sa}=j_{sa}+1)} \sum_{j_i=j_{sa}+l_i-1}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}^{( )}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2)}^{( )} \sum_{(n_{sa}=n_{sa}+j_{sa}-j_i)}^{( )}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - k_2 - k_1 - j_{sa})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{sa} - j_{sa} - j_{sa} - j_{sa} - j_{sa})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq n + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > 0 \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k_1 + k_2 + k_3 = 0 \wedge$$

$$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = k_1 + k_2 + k_3 \wedge$$

$$z = 2 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{( )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa})} \sum_{j_i=j_{sa}^{ik}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-l_{k_1}} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)!(n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)!(j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)!(j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})!(j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!} + \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)}
 \end{aligned}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}}^{l_{ik}} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa})} \sum_{j_i=j_{sa}^{ik}+l_i-l_{sa}}$$

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$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j_s - j^{sa} - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n + 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{\binom{D}{j_s}} \sum_{\substack{(\ ) \\ (j_s=j_{ik}-j_{sa}^{ik}+1)}} \\
 & \sum_{\substack{l_s+j_{sa}^{ik}-1 \\ j_{ik}=j_{sa}^{ik}+1}} \sum_{\substack{(\ ) \\ (j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}} \sum_{\substack{j_i=j^{sa}+l_i-l_{sa}}} \\
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} (n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$

$D \geq n < n \wedge l = k \geq 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^{ik}\} \wedge$

$s = 4 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$



$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_s - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(n_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j_{ik} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} f_{j_{sa}^s, j_{sa}^{ik}, j_{sa}, j_{sa}^i} &= \sum_{k=1}^{(j_{sa}^{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{(j_s)} \\ &\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_i+n-D}^{l_s+s-1} \\ &\sum_{i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ &\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa})!}$$

$$\frac{(D + j_i - n - l_i)! \cdot (n - j_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{j_s=2}^{(l_s)} \sum_{j_{ik}=l_{ik}+D}^{(l_{ik})} \sum_{j_i=l_s+s}^{(n)} \sum_{j^{sa}=j_i+l_{sa}-l_i}^{(n)}$$

$$\sum_{n+l_k}^{(n_i-j_s)} \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{(n_i-j_s-j_{ik}-l_{k_1})}$$

$$\sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{(n_{sa}+j^{sa}-j_i-l_{k_3})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{( )} \sum_{j_{ik}=j^{sa}}^{( )} \sum_{(j^{sa}=j_i+l_s-1)}^{( )} \sum_{j_i=l_i+n-D}^{( )} \sum_{n_i=n+l_k}^{( )} \sum_{(n_i+n+l_k-j_s-1)}^{( )} \sum_{j_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}^{( )} \sum_{(n_i+n+l_k+j_s-1-l_{k2})}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}^{( )} \frac{(j_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D - n + 1 \wedge$$

$$1 \leq j_{ik} - j_{sa}^{ik} - 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{sa}^{ik} - 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = l_k \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=l_i+n+j_{sa}-1)}^{(l_s+j_{sa}-1)} \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k_3-j_{ik}+1)}^{n_{is}+j_s-j_{ik}}$$

$$\frac{(n_{ik}-j_{sa}-k_2)!}{(n_{ik}-j_{sa}-k_2)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(n_{is}-n_{ik}-1)!} \cdot \frac{(n_{is}+j_s-n_{ik}-j_{ik})!}{(n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(n_{ik}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\begin{aligned}
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}} \sum_{(j^{sa}=l_s+j_{sa})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{ik}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k-l_{k3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k1}} \\
 & \sum_{(n_{sa}=n+l_{k3}-j_{ik}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{n_{sa}+j_{ik}-j_i-l_{k3}} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{ik} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}
 \end{aligned}$$

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$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{(n_s=n_{sa}+j_i-j_{ik}-k_3)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - j_s)!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - j_{sa} - j_{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \frac{(D - j_s - 1)!}{(D + j_{sa} - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik} - j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge j^{sa} - j_{sa} - j_s \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - j_s > l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq l_i + l_s + s - n = D$$

$$D - n < n \wedge n - k \geq 0$$

$$j_{sa}^{i-1} - 1 \wedge j_{sa}^{ik} - j_{sa}^{i-1} = j_{sa}^{ik} - 1 \wedge$$

$$\{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}^i, k_3\} \wedge$$

$$s = 4 \wedge s = 5 - k_1 \wedge$$

$$k_2 = 5 - k_1 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{(j_s-1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{s_a} + j^{s_a} - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s + l_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{(j_{i_k}-j_{s_a}^{i_k}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{i_k}=l_i+n+j_{s_a}^{i_k}-D-s}^{l_s+j_{s_a}^{i_k}-1} \sum_{(j^{s_a}=j_{i_k}+j_{s_a}-j_{s_a}^{i_k})}^{(n+j_{s_a}-s)} \sum_{j_i=j^{s_a}+l_i-l_{s_a}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

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$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_s-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{is}+j^{sa}-n_s-j_{ik})!} \cdot \frac{(n_s-1)!}{(n-j_i-1)!} \cdot \frac{(l_s-2)!}{(j_s-2)!} \cdot \frac{(l_{ik}-j_{ik}-j_{sa}^{ik}+1)!}{(j_s+j_{ik}-j_{ik}-l_{ik})! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_{sa} + j_s - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_s + j_{sa}^{ik} - 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + k_1}^n \sum_{(n_{is} = n + k_1 - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{\mathbb{k}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!} \cdot$$

$$\frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=0}^{j_s} \sum_{i=l_i+n-D-s+1}^{j_s-k}$$

$$\sum_{l_{ik}=j_s+j_{sa}}^{l_{ik}} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(j_{sa}-s)}$$

$$\sum_{n+l_k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+l_k-j_s+1)}^{n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{(n_{sa}=n+l_{k3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$(l_s)$$

$$(j_s = l_i + n - D - s)$$

$$j_{ik} = j_s + j_{sa}^{ik} - 1 \quad (j^{sa} = j_{sa}^{ik} - j_{sa} - j_{sa}^{ik}) \quad j_i = j_s + l_i - l_{sa}$$

$$\sum_{n_{is} = n + j_s + 1}^n \sum_{n_{ik} = n_{is} + j_s - j_{ik} - l_{k_1}}$$

$$\sum_{n_{sa} = n_{ik} + j_{ik} - j^{sa} - l_{k_2}} \sum_{n_s = n_{sa} + j^{sa} - j_i - l_{k_3}}$$

$$\frac{(n_i + j_{sa} + j_s - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D - n > 1 \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = l_{k_1} \geq 0 \wedge$$

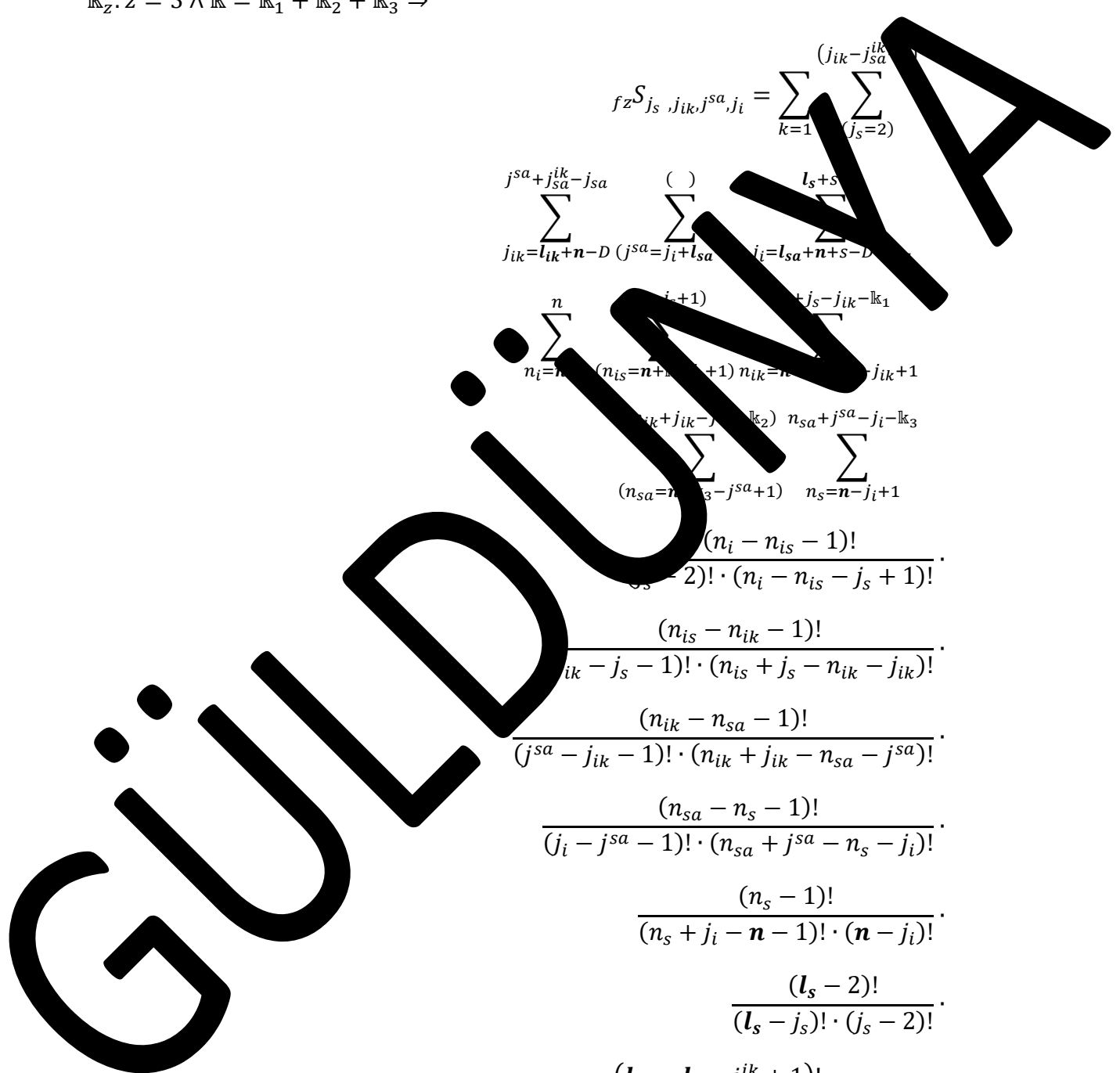
$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik})} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik})} \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa})}^{(j^{sa}=j_i+l_{sa})} \sum_{j_i=l_{sa}+n+S-D}^{l_s+s} \sum_{n_i=n}^n \frac{(n_i+n_{is}+1) \cdot (n_i+n_{ik}-j_{ik}+1)}{(n_{is}=n_{is}+1) \cdot (n_{ik}=n_{ik}-j_{ik}+1)} \cdot \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$



$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}} \sum_{(j^{sa}=j_i+l_{sa})}^{( )} \sum_{j_i=l_s+s}^{n} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{ik})}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+l_k-j_{ik})}^{n_{is}+j_s-l_{k_1}} \\
 & \sum_{(n_{sa}+j^{sa}-j_i)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}+j^{sa}-j_i)}^{(n_{sa}+j^{sa}-j_i)} \\
 & \frac{(n_{ik} - n_{is} - 1)!}{(n_{ik} - n_{is} - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(n_{is} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -
 \end{aligned}$$

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$$\sum_{k=1}^{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}} \sum_{j_{ik}=j_{sa}+j_{sa}^{lk}-j_{sa}}^{\binom{()}{j_{sa}=j_i+l_{sa}-l_i}} \sum_{j_i=l_{sa}+n+s-D-j_{sa}^{lk}}^{l_s+s-1} \sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-lk_1}^{\lfloor \frac{n_{is}-j_{ik}-lk_1}{2} \rfloor} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-lk_2)}^{\binom{()}{j_{sa}=n_{sa}+j_{sa}-j_i}} \frac{(n_i + j_{ik} + j_{sa} - j_{sa} - lk_2 - lk_1 - j_{sa}^{ik})!}{(n_i - n - lk_1 - lk_2 - lk_3)! \cdot (n_i + j_{sa} - j_{sa}^{ik} - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq n - n + 1 \wedge 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{lk} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \wedge j_i + j_{sa} - s \wedge j_{sa} - j_{sa} \leq j_i \leq n \wedge l_{ik} - j_{sa}^{ik} + 1 > 0 \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \wedge l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge D + j_{sa} - n < l_{sa} \leq j_{sa} + l_s + j_{sa} - n - 1 \wedge$$

$$\geq n < n \wedge I = \mathbb{k} \Rightarrow \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge s: \{j_{sa}^s, \mathbb{k}_1, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge = 4 \wedge s + \mathbb{k} \wedge \mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\binom{()}{j_{ik}-j_{sa}^{ik}+1}} \sum_{(j_s=2)}^{\binom{()}{j_s=2}}$$



$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}-1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-n_{is}+n_{ik}-j_{ik})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(l_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}} \sum_{(j^{sa}=l_s+j_{sa})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_k+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} - n_{i_s} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{s_a} + j^{s_a} - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n + 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s + l_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{i_k}-j_{s_a}^{i_k}+1)}^{( )} \\
 & \sum_{j_{i_k}=j^{s_a}+j_{s_a}^{i_k}-j_{s_a}}^{(l_s+j_{s_a}-1)} \sum_{(j^{s_a}=l_{s_a}+n-D)}^{(l_s+j_{s_a}-1)} \sum_{j_i=j^{s_a}+l_i-l_{s_a}}^{(l_s+j_{s_a}-1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-l_{k_1}}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\}$$

$$s = 4 \wedge s = s + 1 \wedge$$

$$k : z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_s - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)} \\
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)!} \cdot (n - j_i)! \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_s - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(n_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa}^{ik} - l_{ik})! \cdot (j_s + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}}^{l_{ik}} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n+j_{sa}-s)} \sum_{j_i=j_{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{l_s+j_s-1} \sum_{j_{ik}=l_{sa}+j_{sa}^{ik}-D-j_{sa}^{ik}}^{j_{ik}-j_s-j_{sa}^{ik}} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}^{( )} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{(j_s=2)}^{(n_s=j_s)} \sum_{(l_{ik}=j_{ik}-D)}^{(l_{ik}=j_{ik})} \sum_{(j_i=j_{sa}+l_i-l_{sa})}^{(j_i=j_{sa})} \sum_{(n_i=n+k_1)}^{(n_i=n+k_1+1)} \sum_{(n_{is}=n+k_2+k_3-j_{ik}+1)}^{(n_{is}=n+k_2+k_3-j_{ik}+1)} \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{sa}=n+k_3-j_{sa}+1)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{l_{sa} + n - l_{sa} - j_{sa} + 1}$$

$$\sum_{j_{ik}=j_s + j_{sa}^{ik}}^{l_{ik}} \sum_{j_{ik} + j_{sa} - j_{sa}^{ik} = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + k}^{(n_i - k + 1)} \sum_{n_i = n + k_2 + k_3 - j_{ik} + 1}$$

$$\sum_{(n_{sa} = k_3 - j^{sa} + 1)}^{(n_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(j_{sa}=j_{ik}+j_{sa}-j_{sa})} \sum_{(j_{sa}^{ik}=j_{sa}-l_{sa})}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+l_s-j_s-j_{ik}-l_{k_1})}$$

$$\sum_{(n_{sa}=n_{ik}+j_{sa}-l_{k_2})}^{(n_{sa}=n_{ik}+j_{sa}-l_{k_2})} \sum_{(n_{sa}+j_{sa}-j_i-l_{k_3})}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq n + s - l_i \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - l_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n - l_i = k \geq 0 \wedge$$

$$j_{sa}^{ik} = 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\ )} \sum_{(j_s=1)}^{(\ )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\ )} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\ )} \sum_{j_i=s}^{l_i}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)}$$

$$\sum_{n_{sa}=n+l_{k_3}-j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \sum_{(n_{sa}+j^{sa}-n_i-l_{k_3})}^{(n_{sa}+j^{sa}-n_i-l_{k_3})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n - n_s - 1)!}{(n - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\ )} \sum_{(j_s=1)}^{(\ )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\ )} \sum_{(j^{sa}=j_{sa})}^{(\ )} \sum_{j_i=s}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{(\ )}$$

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$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{\binom{()}{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{\binom{()}{j_s=1}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{\binom{()}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{j_i=s}^{l_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_{sa})}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(j_{sa})} \sum_{j_i=s}^{(j_{sa})}$$

$$\sum_{i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i - j_{ik} - \mathbb{k}_1 + 1)}^{(j_{sa})}$$

$$\sum_{s=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(j_{sa})} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i + j_{sa} + j_{sa}^{ik} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - j_{sa}^{ik} - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_i+j_{sa}-s)} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=j^{sa}+l_i-l_s}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{ik}+j_{ik}-k_2}^{(n_{sa}+j^{sa}-k_2)} \sum_{(j^{sa}=n-j_i+1)}^{(n_{sa}+j^{sa}-k_2)}$$

$$\frac{(n_i - n_{ik})!}{(n_i - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1+1)}^{(\quad)}$$

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$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}^{( )} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{(l_{sa})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_{sa}^{ik})} \binom{(\cdot)}{k}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{j_i=s}^{(\cdot)}$$

$$\sum_{i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\cdot)}$$

$$\sum_{s=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(\cdot)} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}^{(\cdot)}$$

$$\frac{(n_i + j_{sa}^{ik} + j_{sa}^{ik} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\ )} \sum_{(j_s=1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\ )} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\ )} \sum_{j_i=1}^{l_i}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{ik}=n_i-j_{ik}-lk_1+1)}^{(n_i-j_{ik}-lk_1+1)}$$

$$\sum_{n_{ik}+j_{ik}-lk_2}^{(n_{sa}+j_{ik}-lk_3)} \sum_{(n_{sa}+j_{ik}-lk_3)}^{(n_{sa}+j_{ik}-lk_3)}$$

$$\sum_{(j_i-j_{sa}+1)}^{(n_{sa}+j_{ik}-lk_3)} \sum_{(j_i-j_{sa}+1)}^{(n_{sa}+j_{ik}-lk_3)}$$

$$\frac{(n_i - n_{ik} - j_{ik} + 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_s - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\ )} \sum_{(j_s=1)}^{(\ )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\ )} \sum_{(j^{sa}=j_{sa})}^{(\ )} \sum_{j_i=s}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{ik}=n_i-j_{ik}-lk_1+1)}^{(\ )}$$

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$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{\binom{()}{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{\binom{()}{j_s=1}}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{()}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{j_i=s}^{l_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{\binom{()}{n_s=n-j_i+1}}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{(j_{sa}^{sa})} \sum_{j_{ik}=j_{sa}^{ik}}^{(j_{sa}^{sa})} \sum_{j_i=s}^{(j_{sa}^{sa})} \sum_{s=n+l_k}^n \sum_{(n_{ik}=n_i - j_{ik} - l_{k_1} + 1)}^{(j_{sa}^{sa})} \sum_{(n_s=n_{sa} + j_{sa}^{sa} - j_i - l_{k_3})}^{(j_{sa}^{sa})} \frac{(n_i + j_{sa}^{sa} + j_{sa}^{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$

$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s + l_{k_1} \wedge$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\quad)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\quad)} \sum_{j_i=s}^{l_{ik}+s-j_{sa}^{ik}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{ik}+j_{ik}-k_2}^{(n_{sa}+j^{sa}-k_2)} \sum_{(n_{sa}+j^{sa}-k_2)}^{(n_{sa}+j^{sa}-k_2)}$$

$$\frac{(n_i - n_{ik})!}{(n_i - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_i - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1+1)}^{(\quad)}$$

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$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{\binom{()}{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{\binom{()}{j_s=1}}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{(l_i+j_{sa}-s)}{j^{sa}=j_{sa}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_{ik}-\mathbb{k}_1+1)}{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{\binom{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}{n_s=n-j_i+1}}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_{sa}^{ik})}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(j_{sa}^{ik})} \sum_{j_i=s}^{(j_{sa}^{ik})}$$

$$\sum_{k=0}^n \sum_{n_{ik}=n_i - j_{ik} - k_1 + 1}^{(j_{sa}^{ik})}$$

$$\sum_{n_{sa}=n_{ik} + j_{ik} - j^{sa} - k_2}^{(j_{sa}^{ik})} \sum_{n_s=n_{sa} + j^{sa} - j_i - k_3}^{(j_{sa}^{ik})}$$

$$\frac{(n_i + j_{ik} + j_{sa}^{ik} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - j_{ik} - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$j_{ik} = j^{sa} + l_{ik} - l_{sa} \quad \sum_{(j^{sa}=j_{sa})}^{(l_{sa})} \sum_{j_i = j^{sa} + l_i - l_s}$$

$$\sum_{n_i = n + lk}^n \sum_{(n_{ik} = n_i - j_{ik} - lk_1 + 1)}^{(n_i - j_{ik} - lk_1 + 1)}$$

$$\sum_{n_{ik} + j_{ik} - lk_2}^{(n_{sa} + j_{sa} - lk_2)} \sum_{(n_{sa} + j_{sa} - lk_3)}^{(n_{sa} + j_{sa} - lk_3)}$$

$$\sum_{(j_i - j^{sa} + 1)}^{(n_{sa} + j_{sa} - lk_3)} \sum_{(n - j_i + 1)}^{(n - j_i + 1)}$$

$$\frac{(n_i - n_{ik} - j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}{(n_{sa} - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik} = j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa} = j_{sa})}^{(\quad)} \sum_{j_i = s}$$

$$\sum_{n_i = n + lk}^n \sum_{(n_{ik} = n_i - j_{ik} - lk_1 + 1)}^{(\quad)}$$

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$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{\binom{()}{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{\binom{()}{j_s=1}}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{(l_{ik}+j_{sa}-j_{sa}^{ik})}{j^{sa}=j_{sa}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_{ik}-\mathbb{k}_1+1)}{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{\binom{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}{n_s=n-j_i+1}}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{(j_{sa}^{ik})} \sum_{j_{ik}=j_{sa}^{ik} \cup \dots} \sum_{j_i=s}^{(j_{sa}^{ik})} \sum_{n+l_k}^n \sum_{(n_{ik}=n_i - j_{ik} - l_{k_1} + 1)}^{(j_{sa}^{ik})} \sum_{s=n_{ik} + j_{ik} - j^{sa} - l_{k_2} \quad (n_s = n_{sa} + j^{sa} - j_i - l_{k_3})}^{(j_{sa}^{ik})}$$

$$\frac{(n_i + j_{sa}^{ik} + j_{sa}^{ik} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + l_{k_1} \wedge$$



$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_i + j_{sa}^{ik} - s} \sum_{(j^{sa}=j_{ik} + l_{sa} - l_{ik})}^{( )} \sum_{j_i=j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n_i - j_{ik} - k_1 + 1)}^{(n_i - j_{ik} - k_1 + 1)} \sum_{(n_{sa} + j_{sa} - j_i - k_2)}$$

$$\sum_{(j_i=j^{sa} + 1)}^{(n_{sa} + j^{sa} - j_i - k_2)} \sum_{(n - j_i + 1)}$$

$$\frac{(n_i - n_{ik})}{(n_i - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1} \sum_{(j_s=1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{( )} \sum_{j_i=s}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n_i - j_{ik} - k_1 + 1)}^{( )}$$

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$$\frac{\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{\binom{()}{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} = l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s = 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{\binom{()}{j_s=1}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{\binom{()}{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_{sa}^{ik})}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(j_{sa}^{ik})} \sum_{j_i=s}$$

$$\sum_{i=n+l_k}^n \sum_{(n_{ik}=n_i - j_{ik} - l_{k_1} + 1)}$$

$$\sum_{s=n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_s=n_{sa}+j^{sa}-j_i-l_{k_3})}$$

$$\frac{(n_i + j_{sa}^{ik} + j_{sa}^{ik} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = l_k \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + l_k \wedge$$

$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+l_i-l_s}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_i-j_{ik}-lk_1+1)}^{(n_i-j_{ik}-lk_1+1)}$$

$$\sum_{n_{ik}+j_{ik}-lk_2}^{(n_{sa}+j^{sa}-lk_2)} \sum_{(n_{sa}+j^{sa}-lk_2)}$$

$$\sum_{(n_i-n_{ik}-2)}^{(n_i-n_{ik}-2)}$$

$$\sum_{(n_{sa}-n_{sa}-1)}^{(n_{sa}-n_{sa}-1)}$$

$$\sum_{(n_{sa}-j_{ik}-1)}^{(n_{sa}-j_{ik}-1)}$$

$$\sum_{(n_{sa}-n_s-1)}^{(n_{sa}-n_s-1)}$$

$$\sum_{(j_i-j_i-1)}^{(j_i-j_i-1)}$$

$$\sum_{(n_s-1)}^{(n_s-1)}$$

$$\sum_{(n_s+j_i-n-1)}^{(n_s+j_i-n-1)}$$

$$\sum_{(l_{ik}-j_{sa}^{ik})}^{(l_{ik}-j_{sa}^{ik})}$$

$$\sum_{(l_{ik}-j_{ik})}^{(l_{ik}-j_{ik})}$$

$$\sum_{(D-l_i)}^{(D-l_i)}$$

$$\sum_{(D+j_i-n-l_i)}^{(D+j_i-n-l_i)}$$

$$\sum_{k=1} \sum_{(j_s=1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{ik}=n_i-j_{ik}-lk_1+1)}$$

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$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{\binom{()}{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{\binom{()}{j_s=1}}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{(l_{sa})}{j^{sa}=j_{sa}}} \sum_{\binom{l_i}{j_i=s}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_{ik}-\mathbb{k}_1+1)}{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{\binom{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}{(n_s=n-j_i+1)}}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_s=1}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{( )} \sum_{j_i=s}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{( )}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{(n_s=n_{sa}+j^{sa}-j_i-l_{k_3})}^{( )}$$

$$\frac{(n_i + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D > n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

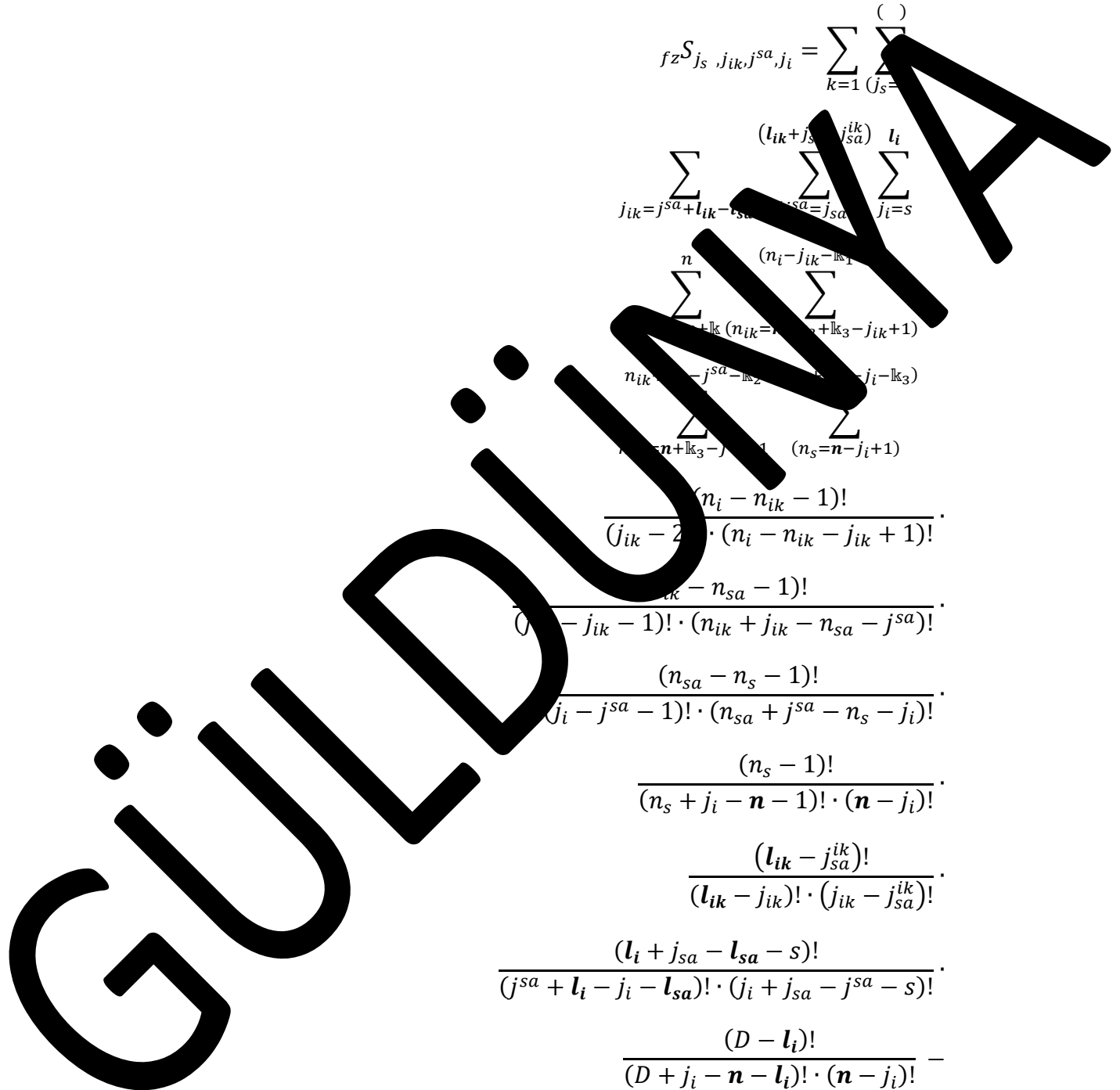
$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \frac{\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_s, j_{sa}^{ik})} \sum_{j_{sa}=j_{sa}}^{(l_{ik}+j_s, j_{sa}^{ik})} \sum_{j_i=s}^{(l_{ik}+j_s, j_{sa}^{ik})} l_i}{\sum_{n_{ik}=j_{sa}-l_{k_2}}^n \sum_{(n_i-j_{ik}-l_{k_1})}^{(n_i-j_{ik}-l_{k_1})} \sum_{(n_{ik}=n_{sa}+l_{k_3}-j_{ik}+1)}^{(n_{ik}=n_{sa}+l_{k_3}-j_{ik}+1)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$



$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s}$$

$$\sum_{n_i=n+\mathbb{k}} \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n_{sa}+1-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} - j_{sa} - j^{sa} - j_{sa})! \cdot (n - l_i)!}$$

$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - 1$   
 $1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$   
 $j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - j_{sa} \leq j_i \leq$   
 $l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} = l_i + j_{sa} - s > l_{sa} \wedge$   
 $D \geq n < n \wedge l = \mathbb{k} \geq 0$   
 $j_{sa} = j_{sa}^i - 1 \wedge j_{ik}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1$   
 $s: \{j_{sa}^{ik}, j_{sa}^{ik}, j_{sa}^{ik}, j_{sa}^{ik}\} \wedge$   
 $s = 4 \wedge s = s + 1$   
 $\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$$



$$\begin{aligned}
 & \sum_{n_{sa}=n+l_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-l_3)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{sa}^{ik} - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (l_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=1)}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{( )} \sum_{(j^{sa}=j_{sa})}^{( )} \sum_{j_i=s}^{( )} \\
 & \sum_{n_i=n+l_1}^n \sum_{(n_{ik}=n_i-j_{ik}-l_1+1)}^{( )} \\
 & \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_2}^{( )} \sum_{(n_s=n_{sa}+j^{sa}-j_i-l_3)}^{( )} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_1 - l_2 - l_3 - j_{sa}^{ik})!}{(n_i - n - l_1 - l_2 - l_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

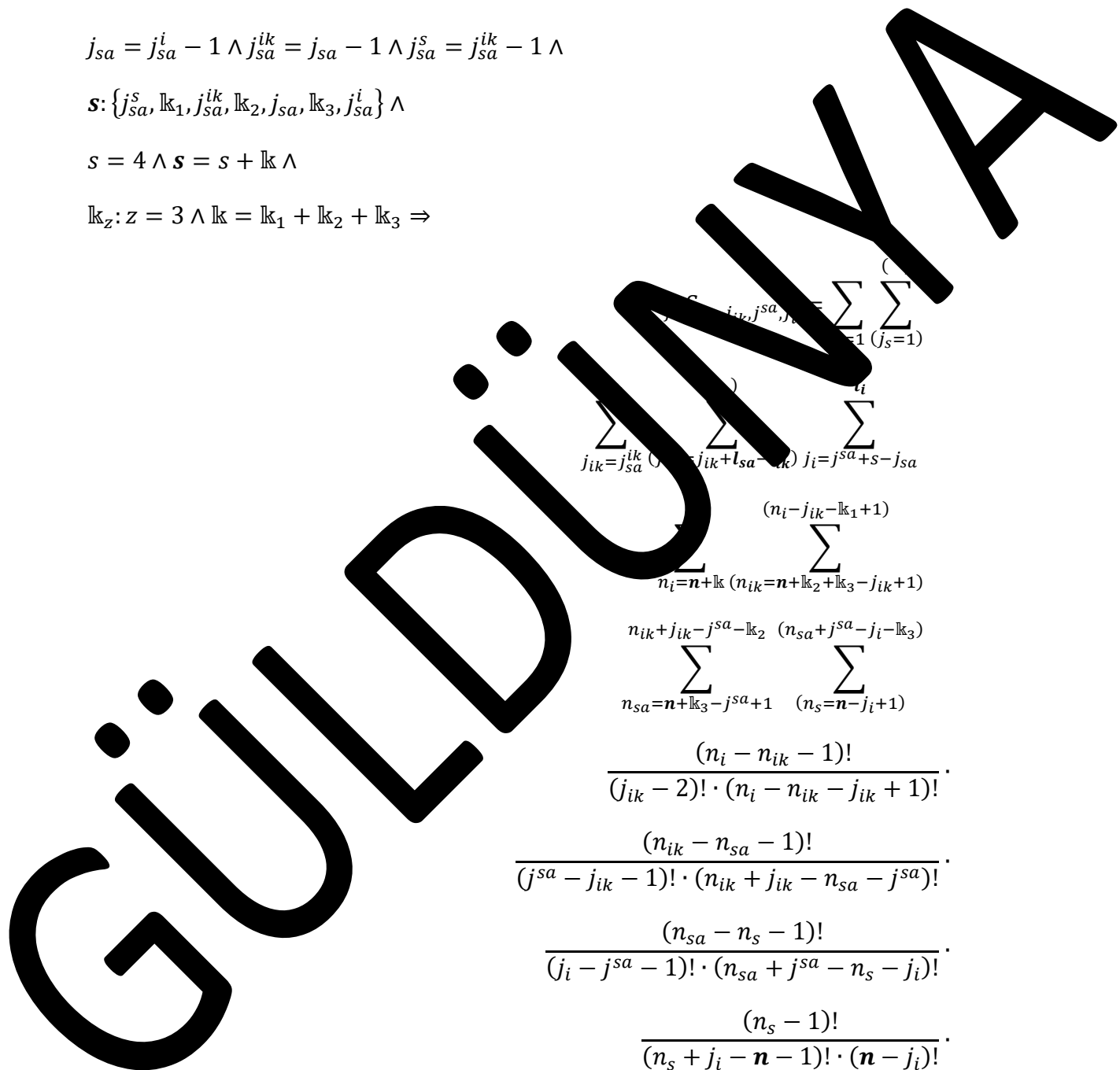
$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$



$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{j_i=j_{sa}^{sa}+s-j_{sa}} \sum_{j_s=1}^{j_{sa}^{sa}-j_{sa}^{ik}+1} \sum_{j_{sa}^{ik}=j_{sa}^{sa}-j_{sa}^{ik}+1}^{j_{sa}^{sa}-j_{sa}^{ik}+1} \frac{(n_i - j_{ik} - \mathbb{k}_1 + 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \sum_{j_{ik}=j_{sa}^{ik} (j_{sa}^{ik} - j_{sa})}^{(\quad)} \sum_{j_i=s}^{(\quad)} \sum_{n_i+l_k (n_{ik}=n_i - j_{sa}^{ik} + 1)}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{sa}^{ik}-l_{k_2} \dots n_{sa}-j_i-l_{k_3}}^{(\quad)} \frac{(n_i + j_{ik} + j_{sa} - j_{sa}^{ik} - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n_i + j_{ik} + j_{sa} - j_{sa}^{ik} - s - j_{sa}^{ik})!} \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i = 0 + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{sa}^{ik} < j_i + j_{sa} - s \wedge n + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > 0 \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = l_{k_1} = 0 \wedge$$

$$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + l_k \wedge$$

$$l_k; z = 3 \wedge k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}^{ik}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}} \sum_{(l_i+j_{sa}-s)}^{(l_i+j_{sa}-s)} \sum_{j_i=j_{sa}^{ik}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_{ik}-l_{k_1}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \\
 & \sum_{n_{sa}=n+l_{k_3}-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-l_{k_2}} \sum_{(n_{sa}+j_{sa}-j_i-l_{k_3})}^{(n_{sa}+j_{sa}-j_i-l_{k_3})} \\
 & \frac{(n_i-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}+1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}+j_{sa}+j_{ik}-n_{sa}-j_{sa})!} \\
 & \frac{(n_i-n_s-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_{ik}-j_{sa}^{ik})!}{(l_{ik}-j_{ik})! \cdot (j_{ik}-j_{sa}^{ik})!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{sa}+l_{k_3}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \\
 & \sum_{k=1}^{( )} \sum_{(j_s=1)}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa}=j_{sa})}^{( )} \sum_{j_i=s} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{( )} \\
 & \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2}} \sum_{(n_s=n_{sa}+j_{sa}-j_i-l_{k_3})}^{( )}
 \end{aligned}$$

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$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$j_s, j_{ik}, j^{sa}, j_i = \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_s)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(j_s)} \sum_{j_i=s}^{(j_s)}$$

$$\sum_{k_1=0}^n \sum_{n+l_{ik} (n_{ik}=n_i - j_{ik} - k_1 + 1)}$$

$$\sum_{s=n_{ik}+j_{ik}-j^{sa}-k_2}^{(n_s)} \sum_{(n_s=n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{sa} - j_{sa}^{ik} - 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s = 4 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\quad)} \sum_{j_i=1}^{l_i}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_{ik}-k_1+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{(n_{ik}+j_{ik}-k_2-k_3-j_{ik}+1)}^{(n_{ik}+j_{ik}-k_2-k_3-j_{ik}+1)}$$

$$\sum_{(n_{ik}+j_{ik}-k_2-k_3-j_{ik}+1)}^{(n_{ik}+j_{ik}-k_2-k_3-j_{ik}+1)} \sum_{(j^{sa}+1)}^{(n_{sa}+j^{sa}-k_2-k_3)} \sum_{(n-j_i+1)}^{(n-j_i+1)}$$

$$\frac{(n_i - n_{ik})!}{(n_i - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_i - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\ )}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}^{(\ )}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)}{(D + s - l_i)! (n - s)!}$$

$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - 1 \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_i \leq j_{sa}^{ik} \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} = l_{sa}$

$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^{ik}\} \wedge$

$s = 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=1)}^{(\ )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\ )} \sum_{j_i=s}^{l_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$



$$\begin{aligned}
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(n - j_{sa} - 1)!}{(j_{ik} - j_{sa} - 1)! \cdot (j_{sa} - j_{ik} - 1)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik} - 1)! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j^{sa})!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - l_i - 1)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \\
& \sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s}^{(\quad)} \\
& \sum_{n_i=n+l_1}^n \sum_{(n_{ik}=n_i-j_{ik}-l_1+1)}^{(\quad)} \\
& \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_2}^{(\quad)} \sum_{(n_s=n_{sa}+j^{sa}-j_i-l_3)}^{(\quad)} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_1 - l_2 - l_3 - j_{sa}^{ik})!}{(n_i - n - l_1 - l_2 - l_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{ik}, j_i} &= \sum_{k=1}^{\binom{()}{j_s}} \binom{j_i + j_s - s}{j_s + l_{ik} - l_{sa}} \binom{n}{j_i = l_i + n - D} \\ &= \sum_{n_i = n + \mathbb{k} - j_s + 1}^n \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{n_{sa} = n + \mathbb{k}_3 - j_{sa} + 1}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\ &= \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{(j_s - j_i)} \sum_{l_s - l_{ik}}^{(j_s - j_i - l_{ik})} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(j^{sa} + l_{ik} - l_{sa})} \sum_{j_i = l_i + n - l_{ik}}^{(j_i + n - l_{ik})} \sum_{n_i = n + j_{ik} - l_{ik} - 1}^n \sum_{n_s = n + j_{ik} - l_{ik} - 1}^{j_s} \sum_{n_s = n_{sa} + j^{sa} - j_i - l_{k_3}}^{(j_s - j_i - l_{k_3})} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - 1 + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(j_i+j_{sa}-s)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{ik}^k)}^{(j_i+l_i+n-D)} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+\mathbb{k}-j_{ik}-\mathbb{k}_1}^{n_{is}+j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{ik}+j_{ik}-j_s-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-j_s-\mathbb{k}_2)} \sum_{(j^{sa}+1)}^{n_{sa}+j^{sa}-\mathbb{k}_3} \sum_{(j_i=n-j_i+1)}^{(j_i=n-j_i+1)}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\quad)} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{(\quad)} \sum_{j_i=l_i+n-D}^n$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\ )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i - n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1, j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \cdot 5 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

$$\mathbb{k}_z: \mathbb{k}_z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)}^{(j_i+j_{sa}-s)} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{i_s}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - l_{k_2})!}$$

$$\frac{(n_s - 1)!}{(n_{sa} + j_i - l_{k_2} - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(n_{sa} - j_s - 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_i - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{( )} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{( )} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+l_{k_1}}^n \sum_{(n_{is}=n+l_{k_1}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$S_{i_s, j_i} = \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \sum_{j_i = j_{sa} + l_{ik} - l_{sa}}^{(l_i + n + j_{sa} - D - s - 1)} \sum_{(j^{sa} = l_{sa} + n - D)}^{n} \sum_{j_i = l_i + n - D}^{n} \sum_{n_i = n + k}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i + j_s - j_{ik} - k_1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{n_{sa} + j^{sa} - j_i - k_3} \sum_{n_s = n - j_i + 1}^{(n_i - n_{is} - 1)!} \cdot \frac{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(n_{ik} - n_{sa} - 1)!} \cdot \frac{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\begin{aligned}
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{l_i!}{(D + j_i - n - l_i)! \cdot (j_i)!} + \\
 & \sum_{j_i=j^{sa}+s-j_{sa}}^{(n+l_i-s)} \sum_{j_s=j^{sa}+l_i-l_{sa}}^{(n+l_s-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}^{(n+l_i-s)} \\
 & \sum_{n+l_{ik}}^{(n_i-j_s)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}
 \end{aligned}$$

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$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(n + j_{sa} - s)} \sum_{(j^{sa} = l_i + n + j_{sa})} \sum_{(j_i = j^{sa} + j_{sa} - j_{sa})}$$

$$\sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_i - j_s + \dots)}^{(n_i - j_s + \dots)} \sum_{(n_{ik} = \dots)}^{(n_{ik} = \dots)}$$

$$\sum_{(n_{sa} = n_{ik} + \dots)}^{(n_{sa} = n_{ik} + \dots)} \sum_{(j^{sa} = \dots)}^{(j^{sa} = \dots)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - \dots)! \cdot (n + j_{sa} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + \dots \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq \dots + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - \dots + 1 = \dots + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < \dots \wedge \mathbb{k} > 0 \wedge$$

$$\dots = j_i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_i+n+j_{sa}-D-s-1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-j_{sa}^{ik})} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j_s+1)}^{n_{ik}+j_{ik}-j^{sa}}$$

$$\sum_{(n_{sa}=n+k_3-j_s+1)}^{n_{ik}+j_{ik}-j^{sa}} \sum_{n_s=n-j_i}^{n_{sa}+j_s-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} + j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} + n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}^n$$

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$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_s - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{s_a} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} - l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

$$\sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{\binom{D}{j_s}}$$

$$\sum_{j_{i_k}=j^{s_a}+l_{i_k}-l_{s_a}} \sum_{(j^{s_a}=l_i+n+j_{s_a}-D-s)}^{(n+j_{s_a}-s)} \sum_{j_i=j^{s_a}+s-j_{s_a}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})}^{\binom{D}{j_s}} \sum_{n_s=n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\ )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_i+n+j_{sa}-D-s-1)} \sum_{(j^{sa}=l_s+n+j_{sa}-D-1)} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s) \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_s)!}{(j^{sa} + l_i - j_i - l_{sa}) \cdot (j_i + j_{sa} - l_s)!}$$

$$\frac{(n - l_i)!}{(n - j_i)!}$$

$$\sum_{s=1}^n \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{(j^{sa} = n + l_s - j_s - l_{sa})} \sum_{(j_i = j^{sa} + s - j_{sa})}$$

$$\sum_{(n_{is} = n + l_s - j_s + 1)} \sum_{(n_{ik} = n + l_s + l_{k_3} - j_{ik} + 1)}$$

$$\sum_{(n_{sa} = n + l_{k_3} - j^{sa} + 1)} \sum_{(n_s = n - j_i + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{(j_s - j_i)} \sum_{l_s - l_{ik}}^{(j_s - j_i)} \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(n + j_{sa} - s)} \sum_{j_i = j^{sa} + s - j_{sa}}^{(j_s - j_i)} \sum_{n_i = n + j_{sa} - j_{sa} - l_{ik} - 1}^n \sum_{j_s = n + l_{ik} - 1}^{j_s} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - l_{k1}}^{j_s} \sum_{j_{sa} = n_{ik} + j_{ik} - l_{k2}}^{j_s} \sum_{n_s = n_{sa} + j^{sa} - j_i - l_{k3}}^{j_s} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - 1 + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, l_{k1}, j_{sa}^{ik}, l_{k2}, j_{sa}, l_{k3}, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=l_i+n-}^n$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}-lk_1}^{n_{is}+j_{ik}-lk_1} \sum_{j_{ik}+1}^{n_{ik}+j_{ik}-lk_2} \sum_{j^{sa}+1}^{n_{sa}+j^{sa}-lk_3}$$

$$\frac{(n_i - n_{is})}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - lk_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - lk_1)!}$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n_{sa}-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_1}} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-l_{k_1})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$\sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$



$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} (n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!$$

$$\frac{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_i \wedge l_i + j_{sa} - s > l_s \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_s)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_s)}^{( )} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - j_{sa} - s)! \cdot (j_i + l_i - j^{sa} - s)!} \cdot \\
 & \frac{(D - j_i - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^n \sum_{(j_s = j_{ik} + l_s - l_s)}^{( )} \\
 & \sum_{j_{ik} = l_i - j_{sa} - D - s}^{n + j_{sa} - s} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_s)}^{( )} \sum_{j_i = j^{sa} + s - j_{sa}}^n \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
 \end{aligned}$$

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$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^n (j_s = j_{ik} + l_s - k)$$

$$\sum_{j_{ik}=l_i+n+j_s}^{n+j_{sa}^k-s} \binom{D-s}{j^{sa}+l_{sa}-l_{ik}} \binom{j_i-j_s}{j_i-j_s-j_{ik}-k_1}$$

$$\sum_{k_1=0}^n \binom{n}{k_1} \binom{n_i+n-k_1}{n_i+n-k_1-j_s+1} \binom{n}{k_2} \binom{n_{ik}=n_i+j_s-j_{ik}-k_1}{n_{ik}=n_i+j_s-j_{ik}-k_1}$$

$$\sum_{k_2=0}^n \binom{n}{k_2} \binom{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{k_3=0}^n \binom{n}{k_3} \binom{n_s=n_{sa}+j^{sa}-j_i-k_3}{n_s=n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i + j_{sa} + j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_i + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j_{sa}=j_{ik}-l_{ik})}^{(\cdot)} \sum_{j_i=l_s+n-D}^n$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}}^{n_{is}+j_s-j_{ik}}$$

$$\sum_{(n_{ik}-j_{sa}-k_2)}^{(n_{ik}-j_{sa}-k_2)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

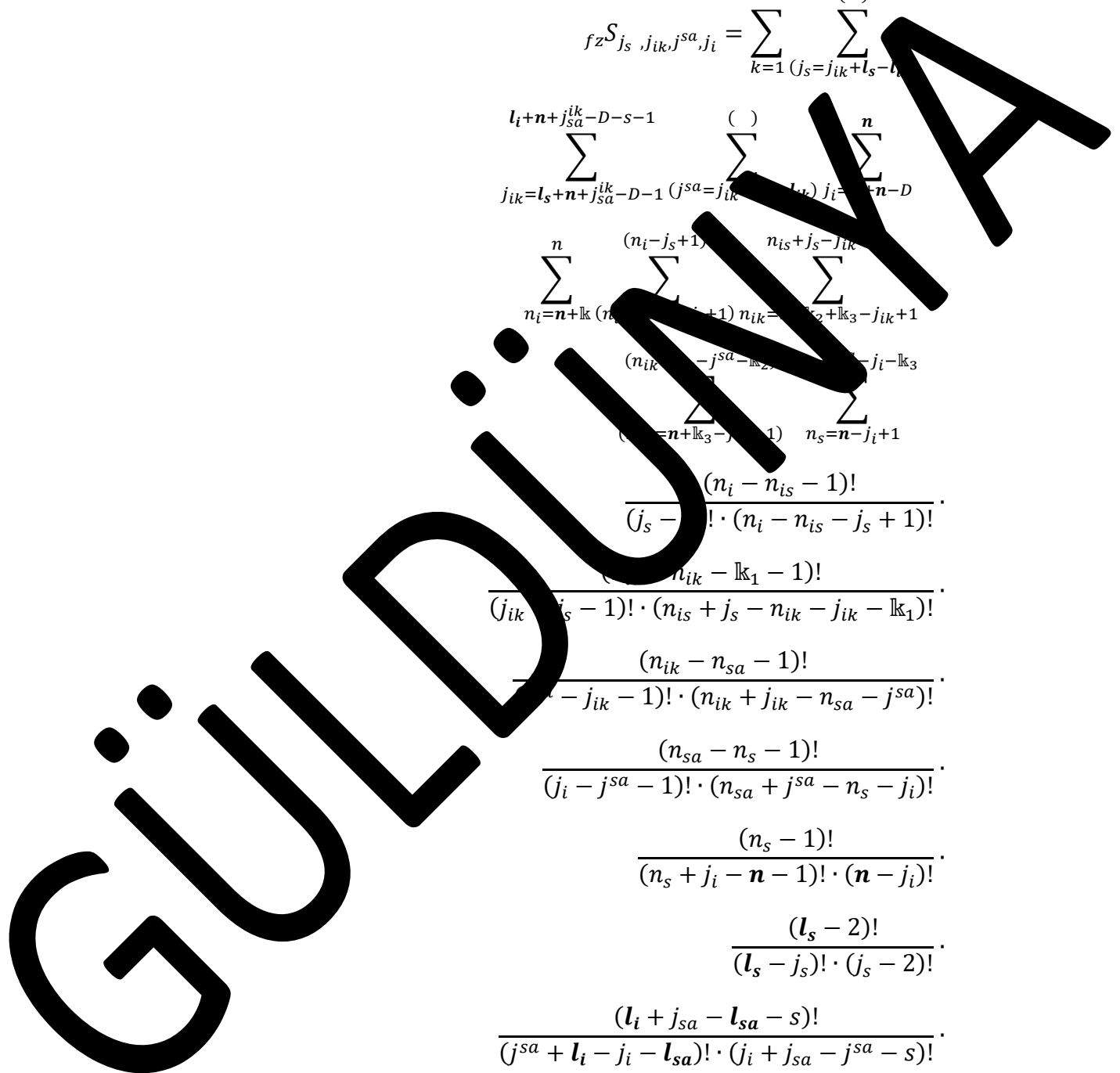
$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$



$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{n+j_{sa}^{ik}-s} \binom{(\quad)}{\quad} \sum_{j_i=j_{sa}+s-j_{sa}}^n$$

$$\sum_{n_i=n+l_k}^n \binom{(n_i-j_s+1)}{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-l_{k_1}}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot$$

$$\frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-l_{k_1})!} \cdot$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j_{sa})!} \cdot$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \cdot$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot$$

$$\frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot$$

$$\sum_{k=1}^{\quad} \binom{(\quad)}{\quad} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{n+j_{sa}^{ik}-s} \binom{(\quad)}{\quad} \sum_{j_i=j_{sa}+s-j_{sa}}^n$$

$$\sum_{n_i=n+l_k}^n \binom{(n_i-j_s+1)}{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} (n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_{sa}^{ik} \leq n - j_{sa}^{ik}$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - j_{ik} \wedge l_i + j_{sa} - s > l_s \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_s^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(n)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(n)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - l_s - s)! \cdot (j_i + l_i - j^{sa} - s)!}$$

$$\frac{(D - j_i - 1)!}{(D + j_i - 1)! \cdot (n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}^{(n)}$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

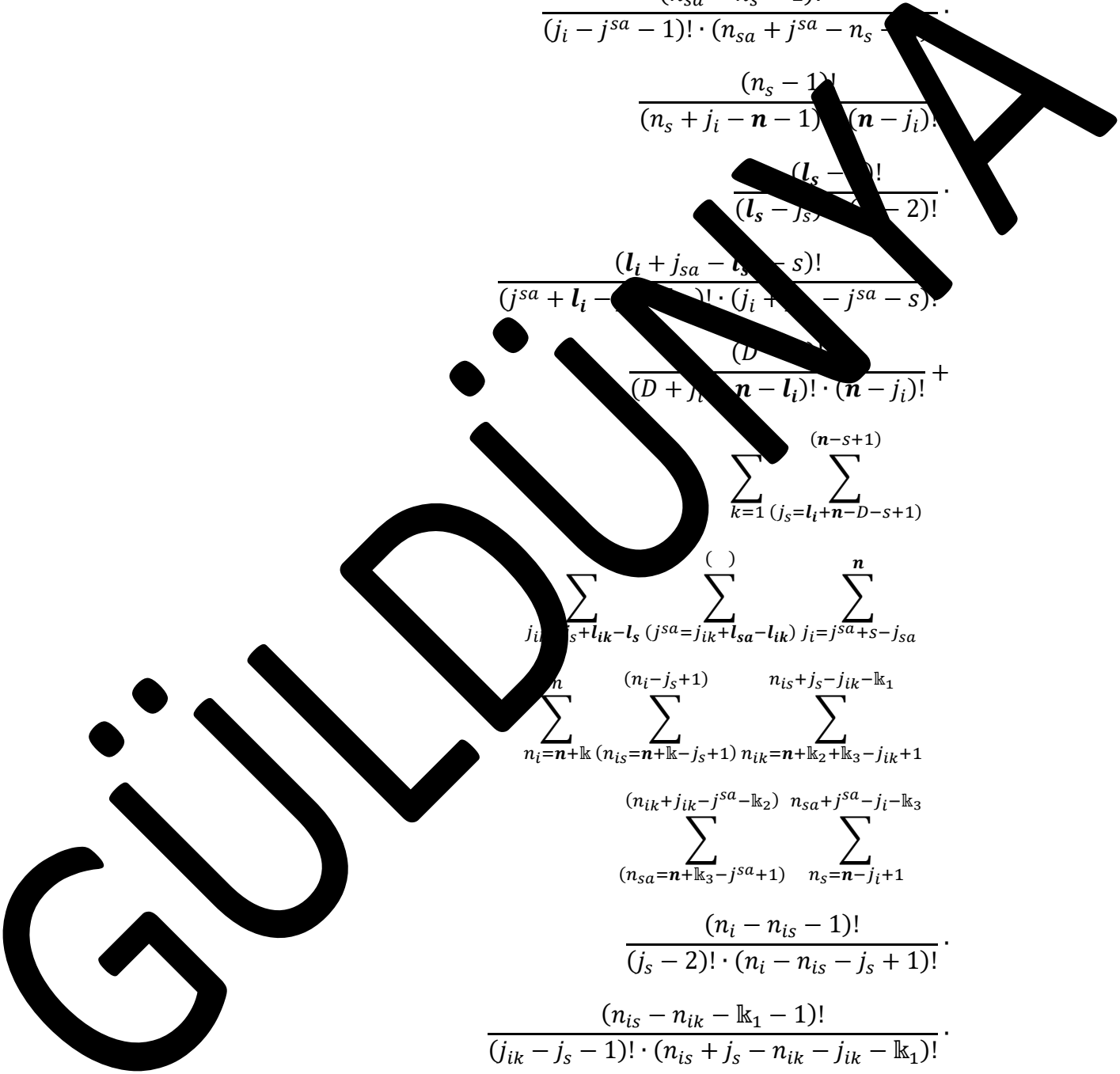
$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$



$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{j_{ik}=j_{ik} - l_s}^{(n - j_s + 1)} \sum_{j_{sa}=j_{sa} - l_{sa}}^{(n - j_s + 1)} \sum_{j_{sa}=n_{ik} + j_{ik} - j^{sa} - l_{sa}}^{(n - j_s + 1)} \sum_{n_{ik}=n_{is} + j_s - j_{ik} - l_{k_1}}^{(n - j_s + 1)} \sum_{n_{sa}=n_{ik} + j_{ik} - j^{sa} - l_{k_2}}^{(n - j_s + 1)} \sum_{n_s=n_{sa} + j^{sa} - j_i - l_{k_3}}^{(n - j_s + 1)} \frac{(n_i + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_i + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$



$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_i+n-D-s)} \sum_{(j_{ik}=j_s+l_{ik}-l_s)}^{(j_s+l_{ik}-l_s)} \sum_{(j_{sa}=j_{ik}-l_{sa})}^{(j_{ik}-l_{sa})} \sum_{(j_i=n-D-j_{sa}^{ik}+1)}^{(j_{ik}-l_{sa})} \sum_{(n_i=n+k)}^{(n_i=n+k)} \sum_{(n_{is}=n_{ik}-k_2+k_3-j_{ik}+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_s-j_{ik})}^{(n_{is}+j_s-j_{ik})} \sum_{(n_{ik}-j_{sa}-k_2)}^{(n_{ik}-j_{sa}-k_2)} \sum_{(n_s=n-k_3-j_i+1)}^{(n_{ik}-j_{sa}-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{\binom{()}{n_{is}=n+l_k-j_s+1}}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{\binom{()}{n_{sa}=n+l_{k_3}-j^{sa}+1}}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_{sa}+j^{sa}-j_i}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} -
 \end{aligned}$$

$$\sum_{k=1} \sum_{\binom{()}{j_s=l_i+n-D-s+1}}^{(n-s+1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{\binom{()}{n_{is}=n+l_k-j_s+1}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{sa}^{ik} \leq n - j_{sa}$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - j_{ik} \wedge l_i + j_{sa} - s > l_s \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=l_i+n-D}^n \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - l_s - s)! \cdot (j_i + l_i - j^{sa} - s)!} \cdot \\
 & \frac{(D - j_i - n - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{( )} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}
 \end{aligned}$$

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$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{j_{ik}=j_{ik} - l_s}^{(n - j_s + 1)} \sum_{j_{sa}=j_{sa} - l_{sa}}^{(n - j_s + 1)} \sum_{j_{sa}=n + l_{ik}}^{(n - j_s + 1)} \sum_{n_{ik}=n_{is} + j_s - j_{ik} - l_{k_1}}^{(n - j_s + 1)} \sum_{n_{sa}=n_{ik} + j_{ik} - j^{sa} - l_{k_2}}^{(n - j_s + 1)} \sum_{n_s=n_{sa} + j^{sa} - j_i - l_{k_3}}^{(n - j_s + 1)} \frac{(n_i + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_i + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_i)}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=j_{sa}^{ik}-l_i)}^{(\cdot)} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n-k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}}$$

$$\frac{(n_{ik}-j_{sa}-j_i-k_3)}{(n_{ik}-j_{sa}-j_i-k_3)} \sum_{(n_i=n+k_3-j_s+1)}^{(n_i=n+k_3-j_s+1)} \sum_{n_s=n-j_i+1}^{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

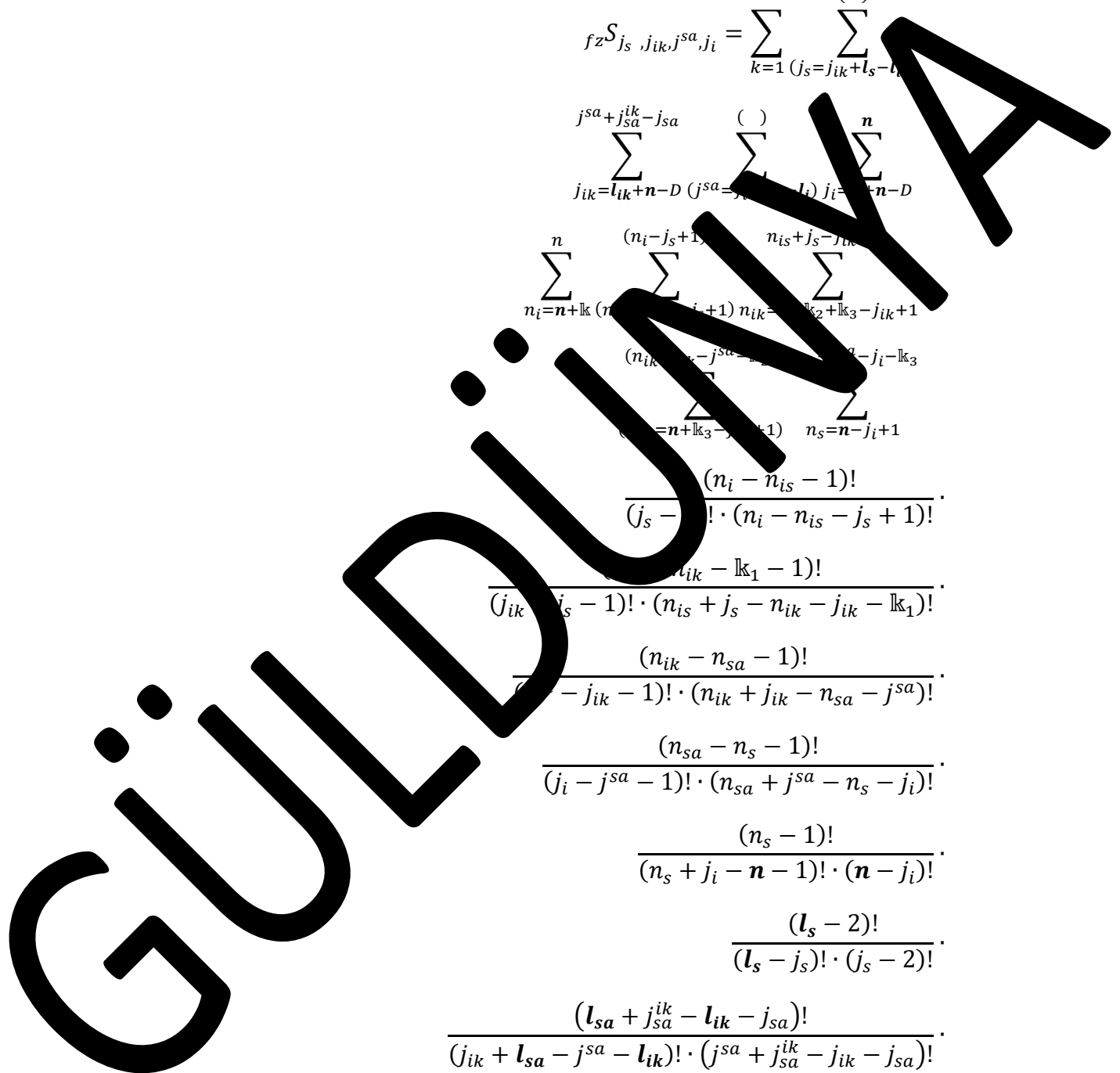
$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$\sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D}{j_s}} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{\binom{D}{j_s}} \sum_{(j^{sa}=j_i+l_i-l_{sa})}^{\binom{D}{j_s}} \sum_{j_i=l_i+n-n}^{\binom{D}{j_s}} \sum_{n_i=n+l_k}^{\binom{D}{j_s}} \sum_{(n_{is}=n+l_k-j_s+1)}^{\binom{D}{j_s}} \sum_{n_{ik}=n_{is}}^{\binom{D}{j_s}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa})}^{\binom{D}{j_s}} \sum_{(n_s=n_{sa}+j^{sa}-j_i)}^{\binom{D}{j_s}} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - l_{sa} - l_{ik} - l_{sa} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3} - l_{sa} - j_{sa}^{ik})! \cdot (n_{ik} + j_{sa}^{ik} - j_{sa} - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(j_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_i \leq j_i + j_{sa} - s \wedge j^{sa} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{sa} \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = l_{k_1} + l_{k_2} + l_{k_3} = 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_{k_1} \wedge$$

$$l_{k_1}; z = 3 \wedge l_{k_1} = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D}{j_s}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_i+n-D}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_i}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-k_1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)!(n_i-n_{is}-j_{ik}-k_1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)!(n_i+j_{ik}-n_{sa}-j_{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)!(j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!} \cdot
 \end{aligned}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{( )} \sum_{(j_{sa}=j_i+l_i-l_{sa})}^{( )} \sum_{j_i=l_i+n-D}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}
 \end{aligned}$$



$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} (n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!$$

$$\frac{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} -$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z = 3 \wedge \mathbb{k} = \dots + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - 1)! \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)} \\
 & \sum_{j_{ik} = j^{sa} + j_s - j_{sa}}^{(n + j^{sa} - s)} \sum_{(j^{sa} = l_i + n + j^{sa} - D - s)} \sum_{j_i = j^{sa} + l_i - l_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\cdot)} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^{(j_{sa}^{ik} - j_{sa} + 1)} = \sum_{j_{ik}=l_s}^{(n+j_{sa}^s - s)} \sum_{j_{sa}^{ik}-D-1}^{(j_{sa}^{ik} - j_{sa} - D - s)} \sum_{j_i=j_{sa}^i+l_i-l_{sa}}^{(n+l_s-l_{ik})}$$

$$\sum_{n+k}^{(n_i-j_s)} \sum_{(n_{is}=n+k-j_s+1)}^{(n_{is}+j_s-j_{ik}-k_1)} \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{sa}+j^{sa}-j_i-k_3)} \sum_{n_s=n-j_i+1}^{(n_i - n_{is} - 1)!}$$

$$\frac{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\ )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(n+j_{sa}-s)} \sum_{(j_{sa}=l_i+n+j_{sa}-D)} \sum_{(j_{sa}^{ik}=l_{sa})}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+j_s-j_{ik}-k_1)}$$

$$\sum_{(n_{sa}=n_{ik}+j_{sa}-k_2)}^{(\ )} \sum_{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\frac{(n_i + j_{ik} + j_{sa} + j_{sa}^{ik} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - k_1 - k_2 - k_3)! \cdot (n + j_i + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_{sa} + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} + l_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_s)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_s}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j_s+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{n_{sa}+j_s-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} + j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} + n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_s)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_s}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!}$$

$$\frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!}$$

$$\frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_s - n_{s_a} - j^{s_a})!}$$

$$\frac{(n_{s_a} - 1)!}{(j^{s_a} - j_s - 1)! \cdot (n_{s_a} + j_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})^{j^{s_a} - l_{i_k}} \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{\binom{()}{j_s=j_{i_k}+l_s-l_{i_k}}}$$

$$\sum_{j_{i_k}=l_i+n+j_{s_a}^{i_k}-D-s}^{n+j_{s_a}^{i_k}-s} \sum_{(j^{s_a}=j_{i_k}+j_{s_a}-j_{s_a}^{i_k})}^{\binom{()}{j_i=j^{s_a}+l_i-l_{s_a}}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})}^{\binom{()}{n_s=n_{s_a}+j^{s_a}-j_i-l_{k_3}}}$$

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$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_i+n-j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s) \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{lk} - j_{sa}^{lk} - l_{sa})!}$$

$$\frac{(n - l_i)!}{(n - l_i) \cdot (n - j_i)!}$$

$$\sum_{s=1}^j \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = n + j_{sa}^{ik} - j_{sa}^{lk}}^{j_{ik} - s} \sum_{(j_{sa} - s)} \sum_{(j_{ik} + j_{sa} - j_{sa}^{lk})} \sum_{(j_i = j^{sa} + l_i - l_{sa})}$$

$$\sum_{n + k}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + k - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{j_s=j_{ik}+l_s-l_{ik}}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D}^{n+j_{sa}^{ik}-s} \sum_{j_{sa}=j_{ik}+j_{sa}-j_s} \sum_{j_i=j_{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_{k_1}} \sum_{n_i=n+l_{k_2}-j_s} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{n_i=n_{ik}+j_{ik}-l_{k_2}} \sum_{n_s=n_{sa}+j_{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} + j_{sa}^{ik} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j_{sa}^{ik} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\geq n < n \wedge l_s > D - \dots + 1 \wedge$$

$$2 \leq j_{ik} \leq j_{ik} - j_{sa} \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j_{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_s - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = l_{k_1} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_{k_1} \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$\begin{aligned}
 f_z S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_i+n-D-s)} \\
 &\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_s}^{(n+j_{sa}-s)} \\
 &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+\mathbb{k}-j_{ik}+\mathbb{k}_1}^{(n_i-j_s+1)} \sum_{j_{ik}+1}^{n_{ik}+\mathbb{k}-j_{ik}+\mathbb{k}_1} \\
 &\sum_{(n_{ik}+j_{ik}-j_s+\mathbb{k}_2)}^{(n_{ik}+j_{ik}-j_s+\mathbb{k}_2)} \sum_{n_{sa}+j^{sa}+\mathbb{k}_3}^{(n_{ik}+j_{ik}-j_s+\mathbb{k}_2)} \sum_{(j^{sa}+1)}^{(n_{ik}+j_{ik}-j_s+\mathbb{k}_2)} \sum_{(n-j_i+1)}^{(n_{ik}+j_{ik}-j_s+\mathbb{k}_2)} \\
 &\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(n+j_{sa}-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}-l_{k_1}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_2}} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_i-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_i+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}+j_{sa}-j_{sa}^{ik})}^{(j^{sa}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_{sa}^{ik} \leq j_{sa} - 1 \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - j_{sa}^{ik} \wedge l_i + j_{sa} - s = l_s \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(l_s - j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - l_s)!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)}$$

$$\sum_{j_{ik}=0}^{(n+j_{sa}-s)} \sum_{l_{ik}=l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

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$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$(n - s)$$

$$(j_s = l_i + n - D - s)$$

$$j_{ik} = j_s - l_s \quad (j^{sa} = j_{sa} - j_{sa}^{ik}) \quad j_i = l_i - l_{sa}$$

$$\sum_{n+l_k}^n \sum_{(n_{i_s} = n + j_s + 1)}^{(-j_s + 1)} \sum_{n_{ik} = n_{i_s} + j_s - j_{ik} - k_1}$$

$$\sum_{n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i + j_{sa} + j_{sa}^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - j_{sa} - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\binom{()}{j_s=j_{ik}+l_s-l_i}} \sum_{j_{ik}=l_{ik}+n-D}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{j_{sa}=j_i+l_{sa}-l_i}^{\binom{()}{j_{sa}=j_i+l_{sa}-l_i}} \sum_{n_i=n+k}^n \sum_{n_{ik}=n-k_2+k_3-j_{ik}+1}^{n_i-j_s+1} \sum_{n_{is}=n-j_i+1}^{n_{is}+j_s-j_{ik}} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D}{j_s}} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{\binom{D}{j_s}} \sum_{(j_{sa}=j_i+l_{sa}-l_i)}^{\binom{D}{j_s}} \sum_{j_i=l_{sa}+n+s-D-j_{ik}}^{\binom{D}{j_s}} \sum_{n_i=n+l_k}^{\binom{D}{j_s}} \sum_{(n_{is}=n+l_k-j_s+1)}^{\binom{D}{j_s}} \sum_{n_{ik}=n_{is}-j_{ik}-l_{k_1}}^{\binom{D}{j_s}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2})}^{\binom{D}{j_s}} \sum_{(n_s=n_{sa}+j_{sa}-j_i)}^{\binom{D}{j_s}} \frac{(n_i + j_{ik} + j_{sa} - j_{sa} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n_{ik} + j_{sa} - j_{sa} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_{k_1} - j_{sa}^{ik} + 1 \leq l_{k_2} \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{k_2} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = l_{k_1} + l_{k_2} + l_{k_3} \wedge$

$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_s^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s \leq s + l_{k_1} \wedge$

$l_{k_3}; z = 3 \wedge l_{k_3} = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D}{j_s}}$$



$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^n$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}-k_1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_1}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{is}-j_{ik}-k_1)!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^n \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^n$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}}{\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \dots$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - l_s)!}{(j_{ik} + l_{sa} - j^{sa} - l_s - 1)! \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \\
 & \sum_{j_{ik} + j_{sa} + j_{sa}^{ik} - j_{sa}}^{(n + j_{sa} - s)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + l_i - l_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{( )} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} & \sum_{j_s = j_{sa}^{ik} - 1}^{j_s = j_{sa}^{ik} + 1} \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{j_{ik} = j_s + j_{sa}^{ik}} \sum_{j_i = j_{sa} + j_{sa}^{ik} - j_{sa}}^{j_i = j_{sa} + j_{sa}^{ik}} \sum_{n_s = n - j_i + 1}^{n_s = n - j_i} \sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{n_{sa} = n + k_3 - j^{sa}} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{ik} = n + k_2 + k_3 - j_{ik}} \sum_{n_{is} = n + k - j_s + 1}^{n_{is} = n + k - j_s} \frac{(n_i - j_s - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(n+j_{sa}-s)} \sum_{(j_{sa}=l_{sa}+n)}^{(n+j_{sa}-s)} \sum_{(j_{sa}^{ik}=l_{sa}-l_{sa})}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+l_s-j_s-j_{ik}-l_{k_1})}$$

$$\sum_{(n_{sa}=n_{ik}+j_{sa}-l_{k_2})}^{( )} \sum_{(n_{sa}+j_{sa}-j_i-l_{k_3})}$$

$$\frac{(n_i + j_{ik} + j_{sa} + j_{sa}^{ik} - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_i + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_{sa} + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} + l_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1} (j_s = j_{ik} + l_s - l_{ik}) \sum_{( )}$$

$$\sum_{j_{ik} = l_{ik} + n - D}^{l_{sa} + n + j_{sa}^{ik} - D - j_{sa} - 1} \sum_{(j_{sa} = l_{sa} + n - D)}^{(n + j_{sa} - s)} \sum_{j_i = j_{sa} + l_i - 1}^{(n + j_{sa} - s)}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n + k_3 - j_{sa} + 1)}^{n_{sa} + j_s - j_i - k_3} \sum_{n_s = n - j_i}^{(n_{sa} + j_s - j_i - k_3)}$$

$$\frac{(n_i - n_{sa} - 1)!}{(j_s - 2)! \cdot (n_{sa} + j_s - 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} + n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_{sa} - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1} (j_s = j_{ik} + l_s - l_{ik}) \sum_{( )}$$

$$\sum_{j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa}}^{n + j_{sa}^{ik} - s} \sum_{(j_{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(n + j_{sa} - s)} \sum_{j_i = j_{sa} + l_i - l_{sa}}$$

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$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\ \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\ \frac{(n_{i_s} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{ik} - l_{k_1})!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} + j_{ik} - j_s - j_i)!} \cdot \\ \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\ \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})^{j^{sa} - l_{ik}} \cdot (j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\ \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=1}^{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{n+j_{sa}^{ik}-s} \sum_{\binom{()}{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )}$$

$$\sum_{j_{ik} = l_s + n + j_{sa}^{ik} - D - 1}^{n + j_{sa}^{ik} - D - j_{sa} - 1} \sum_{(j^{sa} = l_{sa} + n - D)}^{(n + j_{sa} - s)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$



$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 2)!}{(l_s - j_s) \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{lk} - j_{sa}^{lk} - l_{sa})!} \cdot$$

$$\frac{(l_i - l_i)!}{(n - l_i) \cdot (n - j_i)!} \cdot$$

$$\sum_{j_s=1}^{n-l_i-l_{sa}} \sum_{j_s=j_{ik}+l_s-l_{ik}}$$

$$\sum_{j_{ik}=l_{sa}+j_{sa}^{ik}-D}^{n-l_{ik}-s} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}}^{(j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n+l_{ik}}^{(n_i-j_s+1)} (n_{is}=n+l_{ik}-j_s+1) \sum_{n_{ik}=n+l_{ik_2}+l_{ik_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=1}^{(j_s - l_{ik})} \sum_{j_s = j_{ik} + l_{ik} - l_s}^{(j_s - l_{ik})} \sum_{j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa} - l_{ik}}^{n + j_{sa}^{ik} - s} \sum_{j_{ik} = j_{sa} + l_i - l_{sa}}^{(j_{ik} + 1)} \sum_{n_i = n + k}^{(n + k - j_s)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}^{(n_{ik} + j_{ik} - l_{ik} - k_2)} \sum_{n_s = n_{sa} + j_{sa} - j_i - k_3}^{(n_i + j_{ik} + j_{sa} - j_{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!} \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\geq n < n \wedge l_s > D - 1 + 1 \wedge 2 \leq j_s \leq j_{ik} - j_{sa} - 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge j_{sa} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge D \geq n < n \wedge I = k > 0 \wedge j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge s \geq 5 \wedge s = s + k \wedge$$

$$\mathbb{k}_Z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_{sa} + n - D - j_{sa})} \sum_{(j_s = l_{ik} + n - D - j_{sa} + 1)}^{(n + j_{sa} - s)} \sum_{j_{ik} = j_s + l_{ik} - l_s}^{(j^{sa} = l_{sa} + n - D)} \sum_{j_i = j^{sa} + l_i - l_s}^{(n_i + j_{ik} - \mathbb{k}_1)} \sum_{n_i = n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_{ik} + j_{ik} - \mathbb{k}_2)} \sum_{(n_{sa} + j^{sa} - \mathbb{k}_3)}^{(j^{sa} + 1)} \sum_{(n_{sa} + j^{sa} - \mathbb{k}_3)}^{(n - j_i + 1)} \frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} + j_s - 1)! \cdot (n_{sa} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \sum_{k=1}^{(n-s+1)} \sum_{(j_s = l_{sa} + n - D - j_{sa} + 1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(n+j_{sa}-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_i-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_i+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} -
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(n-s+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{sa}^{ik} \leq n - j_{sa}$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_{sa}+n-D-j_{sa})} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - l_{sa})!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(n-s+1)} \\
 & \sum_{j_{ik}+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
 \end{aligned}$$

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$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{n-s+l_i} \sum_{l_{sa}=l_{sa}+n-D-j_{sa}^{ik}-k} \binom{n-s+l_i}{k}$$

$$\sum_{j_{ik}=j_s}^{n-l_s} \sum_{j_{sa}=j_{sa}+j_{sa}^{ik}-j_{ik}} \binom{n-l_s}{j_{ik}} \binom{n-l_s}{j_{sa}}$$

$$\sum_{n+k}^n \sum_{(n_{is}=n+l_s-j_s+1)}^{n-j_s+1} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2}^{n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2} \sum_{n_s=n_{sa}+j_{sa}-j_i-k_3}^{n_s=n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i + j_{sa} + j_{sa}^{ik} - j_{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j_{sa}^{ik} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_i)}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_i+j_{sa}-s)}^{(j_i+j_{sa}-s)} \sum_{j_i=n-D}^n$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n-k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}}$$

$$\frac{(n_{ik}-j_{sa}-j_i-k_3)}{(n_{ik}-j_{sa}-j_i-k_3)} \cdot \frac{(n_{ik}-j_{sa}-j_i-k_3)}{(n_{ik}-j_{sa}-j_i-k_3)}$$

$$\frac{(n_{ik}-j_{sa}-j_i-k_3)}{(n_{ik}-j_{sa}-j_i-k_3)} \cdot \frac{(n_{ik}-j_{sa}-j_i-k_3)}{(n_{ik}-j_{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

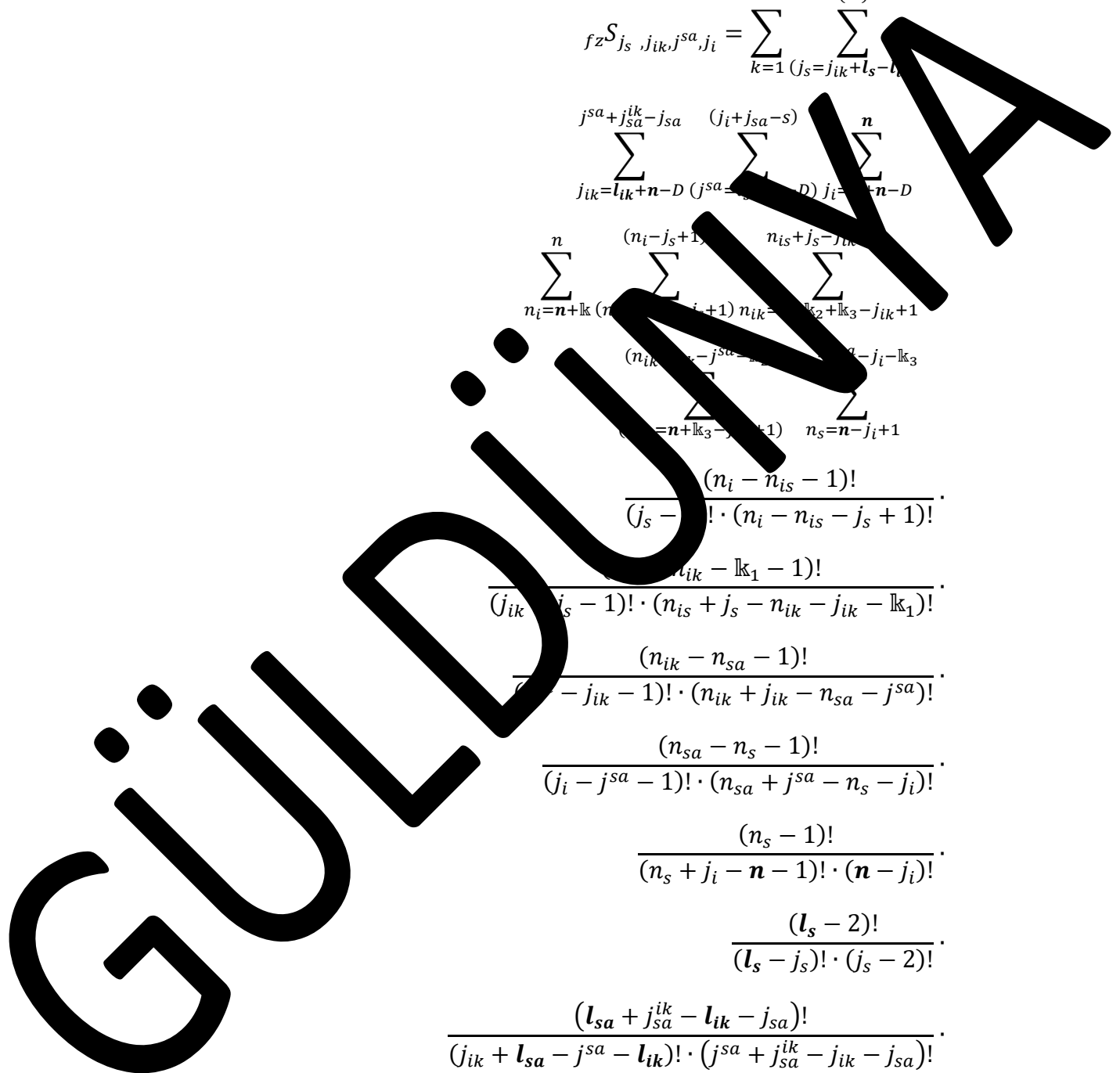
$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$





$$\sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D}{j_s}} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{\binom{D}{j_s}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{\binom{D}{j_s}} \sum_{j_i=l_i+n}^{\binom{D}{j_s}} \sum_{n_i=n+l_k}^{\binom{D}{j_s}} \sum_{(n_{is}=n+l_k-j_s+1)}^{\binom{D}{j_s}} \sum_{n_{ik}=n_{is}}^{\binom{D}{j_s}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{ik_2}-l_{ik_3}-j_{sa}^{ik})}^{\binom{D}{j_s}} \sum_{(n_s=n_{sa}+j^{sa}-j_i)}^{\binom{D}{j_s}} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - l_{ik_2} - l_{ik_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n_{ik} + j_{sa}^{ik} - j_{sa} - j^{sa})!} \cdot \frac{(l_s - 2)!}{(j_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_i \leq j_i + j_{sa} - s \wedge j^{sa} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{sa} \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = l_{k_1} + l_{k_2} + l_{k_3} = 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s \leq s + l_k \wedge$$

$$l_k; z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D}{j_s}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+n+j_{sa}^{lk}-D-1}^{j^{sa}+j_{sa}^{lk}-j_{sa}} \sum_{(j_i+j_{sa}-s)}^{(j_i+j_{sa}-s)} \sum_{j_i=l_i+n-D}^n \\
 & \sum_{n_i=n+lk}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+lk_2+lk_3-j_i}^{n_{is}+j_s-j_{ik}-lk_1} \\
 & \sum_{(n_{sa}=n+lk_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-lk_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_i-n_{ik}-lk_1-1)!}{(j_{ik}-j_s-1)!(n_i-n_{ik}-j_{ik}-lk_1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_i+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)!(j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!} \cdot \\
 & \sum_{k=1}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{\binom{()}{}} \sum_{j_i=l_i+n-D}^n
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-\mathbb{k}_1} \sum_{(n_{s_a}=n_{i_k}+j_{i_k}-j^{s_a}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{s_a}+j^{s_a}-j_i-\mathbb{k}_2} \frac{(n_i + j_{i_k} + j_{s_a} - j^{s_a} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{s_a}^{i_k})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{i_k} + j_{s_a} - j^{s_a} - s - j_{s_a}^{i_k})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{i_k} - j_{s_a}^{i_k} + 1 \wedge j_s + j_{s_a}^{i_k} - 1 \leq j_{i_k} \leq j^{s_a} - j_{s_a}^{i_k} - j_{s_a}$$

$$j_{i_k} + j_{s_a} - j_{s_a}^{i_k} \leq j^{s_a} \leq j_i + j_{s_a} - s \wedge j_i + s - j_{s_a} \leq j_i - n \wedge$$

$$l_{i_k} - j_{s_a}^{i_k} + 1 = l_s \wedge l_{s_a} + j_{s_a}^{i_k} - j_i > l_{i_k} \wedge l_{s_a} + j_{s_a} - s > l_{i_k} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{s_a} = j_{s_a}^i - 1 \wedge j_{s_a}^{i_k} = j_{s_a} - 1, j_{s_a}^s < j_{s_a}^{i_k} - 1$$

$$s: \{j_{s_a}^s, \dots, \mathbb{k}_1, j_{s_a}^{i_k}, j_{s_a}, \mathbb{k}_3, j_{s_a}^i\} \wedge$$

$$s \cdot 5 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz^S_{j_s, j_{i_k}, j^{s_a}, j_i} = \sum_{k=1} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{()}$$

$$\sum_{j_{i_k}=l_{i_k}+n-D}^{j^{s_a}+j_{s_a}^{i_k}-j_{s_a}} \sum_{(j^{s_a}=l_{s_a}+n-D)}^{(l_i+n+j_{s_a}-D-s-1)} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+\mathbb{k}_2+\mathbb{k}_3-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - k_2)!} \cdot \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot \frac{(n_s - 2)!}{(j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+s-j_{sa}}^n \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}} \sum_{\binom{(n+j_{sa}-s)}{j^{sa}=l_i+n+j_{sa}-D-s}} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+\mathbb{k}-j_s+1}} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}} \sum_{\binom{()}{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{sa}^{ik}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_s+l_{sa}^{ik}-D-1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(l_s+l_{sa}^{ik}-D-s-1)}^{(l_s+l_{sa}^{ik}-D-s-1)} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

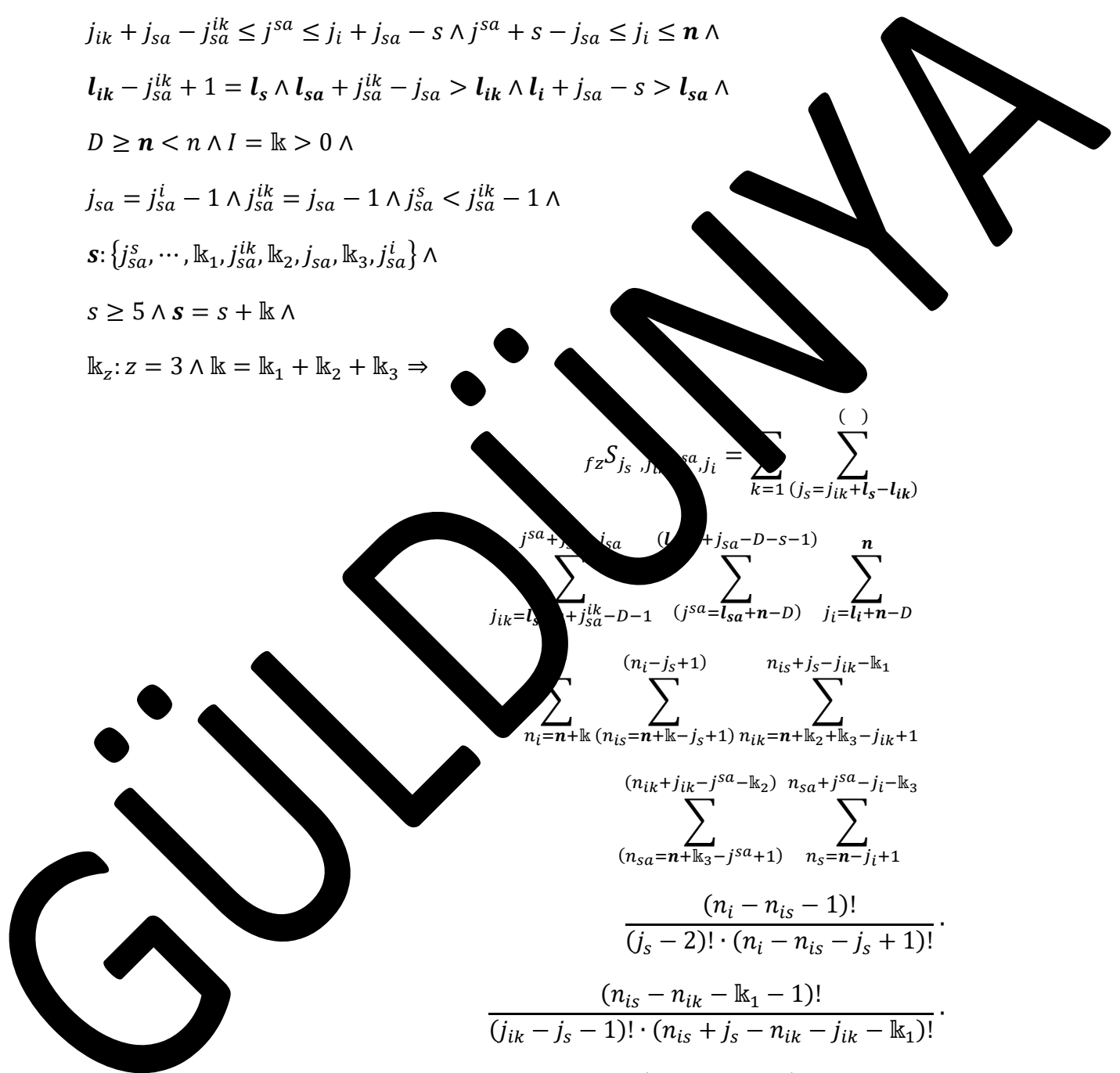
$$\sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$



$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(n - l_i)!}{(D + j_i - n - l_i)! \cdot (j_i)!}$$

$$\sum_{j_{ik}=l_s}^{j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{j_{sa}^{ik} = D - 1}^{(n + j_{sa} - s)}$$

$$\sum_{n+l_k}^{(n_i - j_s)} \sum_{(n_{is} = n + l_k - j_s + 1)}^{n_{is} + j_s - j_{ik} - l_{k1}}$$

$$\sum_{(n_{sa} = n + l_{k3} - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - l_{k2})} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - l_{k3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

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$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{sa}^{ik} - l_{sa} - l_{ik})}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(n+l_i-s)} \sum_{(j_i=l_i+n+j_{sa}-l_{sa})}^{(j_i=j_{sa}+s-j_{sa})}$$

$$\sum_{n_i=n+l_{sa}}^{(n)} \sum_{(n_i=n+l_{sa}-j_{sa})}^{(j_{sa}+1)} \sum_{n_{ik}=n_{is}+j_{sa}-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{ik}=n_{ik}+j_{sa}-l_{k_2})}^{( )} \sum_{n_s=n_{sa}+j_{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - j_s + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{sa} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$



$$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{\binom{()}{j_s=j_{ik}+l_s-l_s}} \sum_{j_{ik}=l_{ik}+n-D}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{j_i=l_i+n-D}^{(n+j_{sa}-s)}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+lk_1-j_{ik}+1)}^{n_{is}+j_{ik}-lk_1} \sum_{(n_{sa}=n+lk_2-j_{sa}+1)}^{n_{ik}+j_{ik}-lk_2} \sum_{(n_{sa}=n-j_i+1)}^{n_{sa}+j_{sa}-lk_3}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - lk_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - lk_1)!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(n_{sa} - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{\binom{()}{j_s=j_{ik}+l_s-l_s}}$$

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$$\begin{aligned}
 & \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{n + j_{sa}^{ik} - s} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(n + j_{sa} - s)} \sum_{j_i = j^{sa} + s - j_{sa}}^n \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_i}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = j_i + 1}^{n_{sa} + j^{sa} - j_i - k_1} \\
 & \frac{(n_i - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - 1)!} \cdot \frac{(n_i - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_i - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_i + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{\binom{()}{}} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{\binom{()}{}}
 \end{aligned}$$

$$\sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{n + j_{sa}^{ik} - s} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{\binom{()}{}} \sum_{j_i = j^{sa} + s - j_{sa}}^n$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-\mathbb{k}_1} \sum_{(n_{s_a}=n_{i_k}+j_{i_k}-j^{s_a}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{s_a}+j^{s_a}-j_i-\mathbb{k}_3} \frac{(n_i + j_{i_k} + j_{s_a} - j^{s_a} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{s_a}^{i_k})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{i_k} + j_{s_a} - j^{s_a} - s - j_{s_a}^{i_k})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{i_k} - j_{s_a}^{i_k} + 1 \wedge j_s + j_{s_a}^{i_k} - 1 \leq j_{i_k} \leq j^{s_a} - j_{s_a}^{i_k} - j_{s_a}$

$j_{i_k} + j_{s_a} - j_{s_a}^{i_k} \leq j^{s_a} \leq j_i + j_{s_a} - s \wedge j_i + s - j_{s_a} \leq j_i - n \wedge$

$l_{i_k} - j_{s_a}^{i_k} + 1 = l_s \wedge l_{s_a} + j_{s_a}^{i_k} - j_i > l_{i_k} \wedge l_{s_a} + j_{s_a} - s > l_{i_k} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{s_a} = j_{s_a}^i - 1 \wedge j_{s_a}^{i_k} = j_{s_a} - 1, j_{s_a}^s < j_{s_a}^{i_k} - 1$

$s: \{j_{s_a}^s, \dots, \mathbb{k}_1, j_{s_a}^{i_k}, j_{s_a}, \mathbb{k}_3, j_{s_a}^i\} \wedge$

$s \leq 5 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$

$\mathbb{k}_2: \mathbb{k}_2 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz S_{j_s, j_{i_k}, j^{s_a}, j_i} = \sum_{k=1} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{(\quad)}$$

$$\sum_{j_{i_k}=l_s+n+j_{s_a}^{i_k}-D-s-1}^{l_i+n+j_{s_a}^{i_k}-D-s-1} \sum_{(j^{s_a}=l_{s_a}+n-D)}^{(n+j_{s_a}-s)} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+\mathbb{k}_2+\mathbb{k}_3-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - k_2)!} \cdot \frac{(n_s - 1)!}{(n_{is} + j_s - 1)!} \cdot \frac{(n - j_i)!}{(l_s - 2)!} \cdot \frac{(l_s - 2)!}{(j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{lk} - l_{sa} - s)!} \cdot \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{n+j_{sa}^{lk}-s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+s-j_{sa}}^n \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

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$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + l_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{n+j_{sa}^{lk}-s} \sum_{\binom{()}{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}}} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{is}=n+\mathbb{k}-j_s+1}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{lk})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{lk})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}^{ik}} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_{sa}+n-D)}^{n} \sum_{j_i=l_i+n-D}^{n}$$

$$\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{ik}=n+k_2+k_3-j_{ik}+1}$$

$$\sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(n - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{(n-s+1)} \sum_{l=0}^{D-s+1}$$

$$\sum_{i_k=j_s+l_{ik}-l_s}^{(n-s)} (j_{sa}^{ik} + j_{sa} - j_{sa}^{ik}) \sum_{j_i=j_{sa}+s-j_{sa}}^n$$

$$\sum_{n+l_k}^{(n_i-j_s)} \sum_{(n_{is}=n+l_k-j_s+1)}^{n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{(n_{sa}=n+l_{k3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-l_{k3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

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$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(-s+1)} \binom{(-s+1)}{k-1} \binom{(-s+1)}{(-s+1)-k}$$

$$\sum_{j_{ik}=j_s+l_{ik}-1}^{(j_{sa}=j_{ik}+j_{sa}-j_i)} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_{ik}}^{(n_i+l_{ik}-j_{sa})} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{n_s=n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - l_{ik} - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - j_s + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$



$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z \mathcal{S}_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=l_s+n-D)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_{sa}+n-D)}^{(n+j_{sa}-s)} \sum_{j_i=l_i+n-}^n$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}+j_{ik}-k_1)}^{n_{is}+j_{ik}-k_1}$$

$$\sum_{(n_{ik}+j_{ik}-k_2)}^{n_{sa}+j_{ik}-k_2} \sum_{(n_s=n-j_i+1)}^{n_{sa}+j_{ik}-k_3}$$

$$\frac{(n_i - n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 + 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} (j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}) \sum_{j_i=j^{sa}+s-j_{sa}}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_{is}-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}+n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_{is}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} (j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk}) \sum_{j_i=j^{sa}+s-j_{sa}}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}}^n
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-\mathbb{k}_1}$$

$$\sum_{(n_{s_a}=n_{i_k}+j_{i_k}-j^{s_a}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{s_a}+j^{s_a}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i + j_{i_k} + j_{s_a} - j^{s_a} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{s_a}^{i_k})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{i_k} + j_{s_a} - j^{s_a} - s - j_{s_a}^{i_k})!}$$

$$\frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{i_k} - j_{s_a}^{i_k} + 1 \wedge j_s + j_{s_a}^{i_k} - 1 \leq j_{i_k} \leq j^{s_a} - j_{s_a}^{i_k} - j_{s_a}$

$j_{i_k} + j_{s_a} - j_{s_a}^{i_k} \leq j^{s_a} \leq j_i + j_{s_a} - s \wedge j_i + s - j_{s_a} \leq j_i - n \wedge$

$l_{i_k} - j_{s_a}^{i_k} + 1 > l_s \wedge l_{s_a} + j_{s_a}^{i_k} - j_i = l_{i_k} \wedge l_{i_k} + j_{s_a} - s = \dots \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{s_a} = j_{s_a}^i - 1 \wedge j_{s_a}^{i_k} = j_{s_a} - 1, j_{s_a}^s < j_{s_a}^{i_k} - 1$

$s: \{j_{s_a}^s, \dots, \mathbb{k}_1, j_{s_a}^{i_k}, \dots, j_{s_a}, \mathbb{k}_3, j_{s_a}^i\} \wedge$

$s \cdot 5 \wedge s = \dots + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \dots$

$$f^Z_{j_s, j_{i_k}, j^{s_a}, j_i} = \sum_{k=1}^{(j_{i_k} - j_{s_a}^{i_k} + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{i_k} = j^{s_a} + l_{i_k} - l_{s_a}}^{(\quad)} \sum_{(j^{s_a} = j_i + l_{s_a} - l_i)}^{(\quad)} \sum_{j_i = l_i + n - D}^n$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{i_s} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - \mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1 - 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - l_{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{()} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$S_{j_{sa}, j_i} = \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - D)}^{(n + j_{sa} - s)} \sum_{(j_{ik} - l_{sa})}^{(n - j_s + 1)} \sum_{(j_i = j^{sa} + l_i - l_{sa})}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{(n_s = n - j_i + 1)}^{(n_i - n_{is} - 1)!} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

GÜLDÜNYA

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_{ik} = l_i + l_{ik} - l_{sa}}^{(n + j_s - l_i)} \sum_{(j^{sa} = l_i + j_{sa} - D - s)}^{(n + j_s - l_i)} \sum_{j_i = j^{sa} + l_i - l_{sa}}^{(n + j_s - l_i)}$$

$$\sum_{=n+l_k}^{(n_i - l_i - 1)} \sum_{(n_{is} = n + l_k - j_s + 1)}^{(n_i - l_i - 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - l_{k_1}}^{(n_i - l_i - 1)}$$

$$\sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - l_{k_2})}^{(n_i - l_i - 1)} \sum_{n_s = n_{sa} + j^{sa} - j_i - l_{k_3}}^{(n_i - l_i - 1)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - l_i - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$j_s > n - l_i \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^k \sum_{(j_s = \dots, n-D)}^{k-j_{sa}^{ik}+1}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D}^{n+j_{sa}^{ik}-s} \sum_{j_{ik}+l_{sa}-l_i}^{j_{sa}+l_i-l_{sa}} \sum_{(n_i-1)}^{n_i-k_1}$$

$$\sum_{n_i=n+k}^{(n_{is}+k-j_s+1)} \sum_{(n_{ik}+j_{sa}-k_2)}^{n_{sa}+j_{sa}-j_i-k_3} \sum_{(n_{sa}-k_3-j_{sa}+1)}^{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(k - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=1}^{(\ )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\ )} \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{n + j_{sa}^{ik} - s} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{(\ )} \sum_{j_i = j_{sa}^{ik} + l_i - l_{sa}}^{(\ )} \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_{sa}^{ik} - 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_{sa}^{ik} - k_1}^{(\ )} \sum_{(j_{sa} = n_{ik} + j_{sa}^{ik} - k_2)}^{(\ )} \sum_{j_i = j_{sa}^{ik} - k_3}^{(\ )} \frac{(n_i + j_{ik} + j_{sa} - j_{sa}^{ik} - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n_i + j_{sa}^{ik} - j_{sa}^{ik} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq j_i + j_{sa}^{ik} \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} - 1 > l_s \wedge l_{sa}^{ik} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge k = k_1 + k_2 + k_3 \wedge$

$j_{sa}^{ik} - j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i + n - D - s)} \sum_{(j_s = l_s + n - D)}$$



$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{n+j_{sa}^{ik}-s} \binom{(\quad)}{\quad} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot$$

$$\frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-l_{k_1})!} \cdot$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j^{sa})!} \cdot$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot$$

$$\frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{n+j_{sa}^{ik}-s} \binom{(\quad)}{\quad} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\begin{aligned}
& \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n - j_i - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 2)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} \cdot \\
& \sum_{k=1} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(n-s+1)} \\
& \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}_1}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}_1-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
& \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\cdot)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (\mathbf{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}
\end{aligned}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$S_{j^{sa}, j_i} = \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - D)}^{( )} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{( )} \sum_{(j_i = l_{sa} + n + s - D - j_{sa})}^n$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

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$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_{ik} = l_{ik} + l_s - l_{sa}}^{(j_{sa} = j_{sa} - l_i)} \sum_{j_i = l_{sa} + n + s - D - j_{sa}}^{(j_{sa} = j_{sa} - l_i)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik} - l_{k_1}}^{(n_{is} = n + l_{k_1} - j_s + 1)}$$

$$\sum_{(n_{sa} = n_{ik} + j_{ik} - j_{sa} - l_{k_2})}^{(n_s = n_{sa} + j_{sa} - j_i - l_{k_3})}$$

$$\frac{(n_i + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$j_s > n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\mathbb{k}} \sum_{(j_s = \dots + n - D)}^{(n_{sa} - s)} \sum_{(j_{ik} = j_{sa} + l_i)}^{(n_{sa} + n - j_{sa} - l_i)} \sum_{(j_i = j_{sa} + l_i - l_{sa})}^{(n_{sa} + n - j_{sa} - l_i - l_{sa})} \sum_{(n_i = n + \mathbb{k})}^{(n_{sa} + n - j_{sa} - l_i - l_{sa} - \mathbb{k}_1)} \sum_{(n_{sa} = \dots)}^{(n_{sa} + n - j_{sa} - l_i - l_{sa} - \mathbb{k}_2 - \mathbb{k}_3 - j_{ik} + 1)} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + n - j_{sa} - l_i - l_{sa} - \mathbb{k}_3 - j_{sa} + 1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(n_{is} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+l_{ik}-l_{sa}}^{(n+j_{sa}-s)} \sum_{(j_{sa}=l_{sa}+n-D)} \sum_{j_i=j_{sa}^{ik}+l_i-1}^{(n+j_{sa}-s)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}^{(n_i-j_s+1)}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-1)}^{(\cdot)} \sum_{(n_s=n_{sa}+j_{sa}^{ik}-j_i)}^{(\cdot)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa}^{ik} - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n_i + j_{sa}^{ik} - j_{sa}^{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(n - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - a + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > 0 \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} \wedge l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = k_1 + k_2 + k_3 \wedge$

$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_s^s, \dots, k_1, j_{sa}^{ik}, j_{sa}^{ik}, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$z = 2 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j_{sa}^{ik}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa}}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{(n_s=j_i+1)}^{(n_{sa}+j^{sa}-j_i-1)}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa}}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_s)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_s < n$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$

$D \geq n < n \wedge I = k > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} -$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_{sa}+n-D-j_{sa})} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$



$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_s - l_{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa} + 1)!} \cdot \\
 & \frac{(D - l_{ik})!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{n-s+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(n-s+1)} \sum_{\substack{j_i=j_s+j_{sa}-1 \\ (j^{sa}=j_{ik}+l_{sa}-l_{ik})}}^{n+j_{sa}^{ik}-s} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{( )} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
 \end{aligned}$$

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$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{n-s+l_i-l_s} \sum_{l_{sa}=l_{sa}+n-D-j_{sa}^{ik}}$$

$$\sum_{j_{ik}=j_s}^{j_{ik}-1} \sum_{j_{sa}=j_{sa}+l_{sa}-l_{ik}}^{j_{sa}-1} \sum_{j_i=l_i-l_{sa}}$$

$$\sum_{n=n+l_k}^n \sum_{n_{is}=n+l_k}^{n-l_s+1} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k2}} \sum_{n_s=n_{sa}+j_{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{sa} + j_{sa}^{sa} - j_{sa}^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j_{sa}^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n_s - 1)}^{(j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = j_{sa} + l_{ik} - l_{sa}}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_{sa} = j_i + l_{sa} - l_{sa})}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_i = n_i - j_{sa} - l_{ik} + 1)}^{(j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{n_i = n + k}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n_{sa} + k_3 - j_{ik} + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n_{sa} + k_3 - j_{ik} + 1)}^{(n_i - j_s + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_{sa} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{sa} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{( )} \sum_{(j_{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_{ik}+s+n-D}^n$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}^{( )}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2)}^{( )} \sum_{(n_{sa}=n_{sa}+j_{sa}-j_i)}^{( )}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n_i + j_{sa} - j_{sa} - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > 0 \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = k_1 + k_2 + k_3 \wedge$

$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} + 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, j_{sa}, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$z = 2 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz_{j_s, j_{ik}, j_{sa}, j_i}^S = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}^{( )}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}-l_{k_1}}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_2}}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot$$

$$\frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-n_{ik}-j_{ik}-l_{k_1})!} \cdot$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{is}+j_{ik}-n_{sa}-j^{sa})!} \cdot$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot$$

$$\frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot$$

$$\sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_s)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_s < n$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$

$D \geq n < n \wedge I = k > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} -$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{(\cdot)} \sum_{(j_s = j_{ik} - j_{sa} + 1)}^{(\cdot)} \\
& \sum_{j_{ik} = n - D}^{n + j_{sa}^{ik} - s} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{(\cdot)} \sum_{j_i = j^{sa} + l_i - l_{sa}}^{(\cdot)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
& \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\cdot)} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} & \sum_{i_{ik}=l_{ik}+n-D}^{n+j_{sa}} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(l_{ik}+n-D-j_{sa})} \sum_{n_s=n-j_i+1}^{(n_i-j_s)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{sa}=n+k_3-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \end{aligned}$$



$$\begin{aligned}
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(n-s+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{n+j_{sa}^{ik}-s} \sum_{(j_{sa}=j_s+l_{sa}-l_{ik})}^{(n-s+1)} \sum_{(j_{sa}=j_s+l_{sa}-l_{ik})}^{(n-s+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-j_{ik}-l_{k_1})}^{(n-s+1)} \\
 & \sum_{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})}^{(n-s+1)} \sum_{(n_{sa}=n-j_i-l_{k_3})}^{(n-s+1)} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa})}^{(n-s+1)} \sum_{n_s=n-j_i+1}^{(n-s+1)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -
 \end{aligned}$$

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$$\sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(n-s+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+l_i-1}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}^{( )}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2-k_3)}^{( )} \sum_{(n_{sa}=n_{sa}+j^{sa}-j_i)}^{( )}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n_i + j_{sa} - j^{sa} - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} \wedge l_{sa} + j_{ik} - j_{sa}^{ik} \leq l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge I = k_1 + k_2 + k_3 \wedge$

$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, j_{sa}^i, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$z = 2 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{(j_i+j_{sa}-s) \\ (j^{sa}=l_{sa}+n-D)}} \sum_{j_i=l_i+n-D}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+l_k-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i \\ n_s-j_i+1}} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=1}^{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}} \sum_{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{() \\ (j^{sa}=j_i+j_{sa}-s)}} \sum_{j_i=l_i+n-D}^n
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-\mathbb{k}_1} \sum_{(n_{s_a}=n_{i_k}+j_{i_k}-j^{s_a}-\mathbb{k}_2)}^{(\ )} \sum_{n_s=n_{s_a}+j^{s_a}-j_i-\mathbb{k}_3} \frac{(n_i + j_{i_k} + j_{s_a} - j^{s_a} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{s_a}^{i_k})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{i_k} + j_{s_a} - j^{s_a} - s - j_{s_a}^{i_k})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{i_k} - j_{s_a}^{i_k} + 1 \wedge j_s + j_{s_a}^{i_k} - 1 \leq j_{i_k} \leq j^{s_a} - j_{s_a}^{i_k} - j_{s_a}$

$j_{i_k} + j_{s_a} - j_{s_a}^{i_k} \leq j^{s_a} \leq j_i + j_{s_a} - s \wedge j_i + s - j_{s_a} \leq j_i - n \wedge$

$l_{i_k} - j_{s_a}^{i_k} + 1 > l_s \wedge l_{s_a} + j_{s_a}^{i_k} - j_i = l_{i_k} \wedge l_{i_k} + j_{s_a} - s > l_s \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{s_a} = j_{s_a}^i - 1 \wedge j_{s_a}^{i_k} = j_{s_a} - 1, j_{s_a}^s < j_{s_a}^{i_k} - 1$

$s: \{j_{s_a}^s, \dots, \mathbb{k}_1, j_{s_a}^{i_k}, \dots, j_{s_a}, \mathbb{k}_3, j_{s_a}^i\} \wedge$

$s \cdot 5 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz_{j_s, j_{i_k}, j^{s_a}, j_i} = \sum_{k=1}^{(j_{i_k} - j_{s_a}^{i_k} + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{i_k} = j^{s_a} + l_{i_k} - l_{s_a}}^{(l_i + n + j_{s_a} - D - s - 1)} \sum_{(j^{s_a} = l_{s_a} + n - D)} \sum_{j_i = l_i + n - D}^n$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{i_s} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{i_k} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{i_k} + 1}^{n_{i_s} + j_s - j_{i_k} - \mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}^n \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{n} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - j_{ik} - \mathbb{k}_1 - 1)!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
& \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - j_{sa} - j_{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s - 1)! \cdot (j_{ik} - j_s - j_{sa} + 1)!} \cdot \\
& \frac{(l_i - j_{sa} - l_{sa} - s)!}{(j_i + l_i - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{(\cdot)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\cdot)} \\
& \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(n + j_{sa} - s)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} \sum_{j_i = j^{sa} + s - j_{sa}} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
& \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\cdot)} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z \mathcal{S}_{j_s, j_{sa}, j_i} = \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{l_i = n + j_s - D - s - 1}^{l_i + n + j_s - D - s - 1} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = l_i + n - D}^n$$

$$\sum_{n_i = n + k}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + k - j_s + 1)}^{n_{is} + j_s - j_{ik} - k_1} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}$$

$$\sum_{(n_{sa} = n + k_3 - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!}$$

$$\frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (j_i)!}$$

$$\sum_{j_{ik} = n + j_{sa}^{ik} - D - s}^{n + j_{sa}^{ik} - s} \sum_{j_i = j^{sa} + s - j_{sa}}^n \sum_{j_{ik} = n + l_{sa} - l_{ik}}^{(j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = n + l_{sa} - l_{ik}}^{n + j_{sa}^{ik} - s} \sum_{j_i = j^{sa} + s - j_{sa}}^n \sum_{j_{ik} = n + l_{sa} - l_{ik}}^{(j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = n + l_{sa} - l_{ik}}^{n + j_{sa}^{ik} - s} \sum_{j_i = j^{sa} + s - j_{sa}}^n \sum_{j_{ik} = n + l_{sa} - l_{ik}}^{(j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{n_{sa} = n + l_{k_3} - j^{sa} + 1}^{(n_{ik} + j_{ik} - j^{sa} - l_{k_2})} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{j_s=j_{ik}+j_{sa}^{ik}+1}^{( )} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D}^{n+j_{sa}^{ik}-s} \sum_{j_{sa}^{ik}=j_{ik}+l_{sa}-j_s}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}}^{( )} \frac{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < l_s > D - 1 \wedge$$

$$2 \leq j_s < j_{ik} - j_{sa}^{ik} \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{sa}^{ik} - 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=l_s+n-D)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{(j_i=l_i+n-D)}^n$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(j_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_s+1)}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)}$$

$$\frac{(j_{ik}-j^{sa}-\mathbb{k}_2-j_{sa}+j^{sa}-j_i-\mathbb{k}_3)!}{(n_{sa}=n+\mathbb{k}_2-j^{sa}+1)! \cdot (j_i+1)!}$$

$$\frac{(n_{is}-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!}$$

$$\frac{(n_{is}-n_{is}-\mathbb{k}_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-\mathbb{k}_1)!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

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$$\begin{aligned}
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+s-j}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{n_{sa}+j_{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)}
 \end{aligned}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\binom{()}{n_{is}=n+l_k-j_s+1}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}$$

$$\sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}} \sum_{\binom{()}{n_s=n_{sa}+j_i-j_{i-l_{k_3}}}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - j_{sa} - j_{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_{sa} - 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - j_{sa})!}{(D + j_{sa} - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik}^{ik} \leq j_{ik} \leq j_s + j_{sa}^{ik} - j_{sa}^{ik} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge j^{sa} - j_{sa} - j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} > l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = l_{sa} - 0 \wedge$

$j_s = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{ \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^{ik}, l_{k_3}, j_{sa}^{ik} \}$

$\geq 5 \wedge l_{sa} = s + l_k \wedge$

$l_{k_z}: z = 3 \wedge l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{\binom{()}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{j_i=l_i+n-D}^n$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_k+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_s - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_s - j^{s_a} - 1)! \cdot (n_{s_a} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s + j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{i_k}-j_{s_a}^{i_k}+1)}^{( )}$$

$$\sum_{j_{i_k}=j^{s_a}+j_{s_a}^{i_k}-j_{s_a}}^{( )} \sum_{(j^{s_a}=j_i+l_{s_a}-l_i)}^{( )} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_s)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$

$D \geq n < n \wedge I = k > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 1)!}$$

$$\frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!}$$

$$\frac{(n_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa}^{ik} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{sa}, j_i} = \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - D)}^{(j_{sa} - s)}$$

$$\sum_{j_{ik} = l_{ik} - D}^{(j_{sa} - D - 1)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{(j_{sa} - s)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + k}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + k - j_s + 1)}^{n_{is} + j_s - j_{ik} - k_1} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}$$

$$\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$



$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_s - j_{sa})!} \cdot \\
 & \frac{(D - j_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \frac{(j_{ik} - j_{sa}^{ik} + 1)!}{(j_{ik} + j_{sa}^{ik} - j_s - j_{sa})!} \sum_{k=0}^{j_{ik} - j_{sa}^{ik} + 1} \sum_{l=0}^{n - j_{ik} - k} \\
 & \sum_{j_{ik}=l_{ik} + j_{sa}^{ik} - s}^{n + j_{sa}^{ik} - s} \sum_{j_{sa}=j_{sa}^{ik} - D - s}^{(n + j_{sa}^{ik})} \sum_{j_i=j^{sa} + l_i - l_{sa}} \\
 & \sum_{n_{ik}=n + k_2 + k_3 - j_{ik} + 1}^n \sum_{n_{is}=n + k_1 - j_s + 1}^{(n_i - j_{ik})} \sum_{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa}=n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s=n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_2} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_s+1} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-j_s}^{n+j_{sa}^{ik}-s} \sum_{j_{sa}=j_{ik}-j_{sa}^{ik}}^{j_{sa}+1} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{n_{is}+k} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}^{n_{is}+k} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}^{n_{is}+k} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D > n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n \wedge I = k > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=l_s+n-k)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{n+j_{sa}^{ik}-s} \sum_{(j_{sa}=l_i+n+j_{sa})}^{(n+j_{sa}-s)} \sum_{i=j_s}^{n-j_{sa}} \sum_{i=l_{sa}}^{n-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=j_s-j_{ik}}^{n_{is}+j_s-j_{ik}}$$

$$\sum_{(n_{ik}=n-k_2+k_3-j_{ik}+1)}^{(n_{ik}=n-k_2+k_3-j_{ik}+1)} \sum_{(n_{ik}=n-k_2+k_3-j_{ik}+1)}^{(n_{ik}=n-k_2+k_3-j_{ik}+1)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa}^{ik} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\begin{aligned}
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{n+j_{sa}^{ik}-s} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n+j_{sa}-s)} \sum_{j_i=j_{sa}+l_i-l_{ik}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \frac{(n_{ik}+j_{ik}-j_{sa}^{ik})! \cdot (n_{is}+j_s-j_{ik}-l_{k_1})!}{(n_{sa}=n+l_{k_3}-j_{ik}+1)! \cdot (n_s=n-j_i+1)!} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}+j_s-j_{ik}-l_{k_1})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}^{ik}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa}^{ik})!} \\
 & \frac{(n_{sa}-n_s-1)!}{(n_{sa}-j_{sa}^{ik}-1)! \cdot (n_{sa}+j_{sa}^{ik}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}^{ik}-l_{ik})! \cdot (j_{sa}^{ik}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \\
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n-s+1)}
 \end{aligned}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{\binom{()}{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{\binom{()}{n_{is}=n+k-j_s+1}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}$$

$$\sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}} \sum_{n_s=n_{sa}+j_s-j_i-k_3}$$

$$\frac{\binom{()}{n_i+j_{ik}+j_{sa}-j^{sa}-s-k_1-k_2-j_s+1}}{(n_i-n-k_1-k_2-k_3)! \cdot (n+j_{ik}+j_{sa}-j^{sa}-s-k_1-k_2-j_s+1)!} \cdot \frac{(l_s-2)!}{(l_s-j_s+1) \cdot (j_s-2)!} \cdot \frac{(D-j_s+1)!}{(D+j_{ik}+j_{sa}-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik}^{ik} \leq j_{ik} \leq j_s + j_{sa} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge j^{sa} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k_1 + 0 \wedge$$

$$j_s = j_{sa}^i - 1, j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{ \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i, k_3, j_s \}$$

$$\geq 5 \wedge l_s = s + k \wedge$$

$$k_z: z = 3 \wedge k_1 + k_2 + k_3 \Rightarrow$$

$$fz_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{\binom{()}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^n$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_s - j^{s_a} - 1)! \cdot (n_{s_a} + j_{i_s} - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s - j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{i_k}-j_{s_a}^{i_k}+1)}^{( )}$$

$$\sum_{j_{i_k}=j^{s_a}+j_{s_a}^{i_k}-j_{s_a}}^{( )} \sum_{(j^{s_a}=j_i+l_{s_a}-l_i)}^{( )} \sum_{j_i=l_{s_a}+n+s-D-j_{s_a}}^n$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

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$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!}$$

$$\frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(l_s - j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!}$$

$$\frac{(n_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa}^{ik} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\ )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = l_{sa} + n - D)}^{(n + j_{sa} - s)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\ )} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$



$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z \mathcal{S}_{j_s, j_{sa}, j_i}^{j_{sa}, j_i} = \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - D)}^{(j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = k + n - D}^{n + j_{sa}^{ik} - j_{sa} - 1} \sum_{(j^{sa} = l_{sa} + n - D)}^{n + j_{sa} - s} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + k}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + k - j_s + 1)}^{n_{is} + j_s - j_{ik} - k_1} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}$$

$$\sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot \\
 & \frac{(D + j_i - n - l_i)! \cdot (n - j_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=0}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{l=0}^{(n - j_i - k - n - D)} \sum_{m=0}^{(n + j_{sa}^{ik} - s)} \sum_{n_{ik}=l_{sa} + j_{sa}^{ik} - D - j_{sa}}^{(n + j_{sa}^{ik} - s)} \sum_{j_i=j_{sa} + l_i - l_{sa}}^{(n + j_{sa}^{ik} - s)} \\
 & \sum_{n_{is}=n + k}^n \sum_{(n_{is}=n + k - j_s + 1)}^{(n_i - j_i - k)} \sum_{n_{ik}=n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa}=n + k_3 - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j_{sa} - k_2)} \sum_{n_s=n - j_i + 1}^{n_{sa} + j_{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_s = j_{ik} - j_{sa}^{ik} + 1}^{n + j_{sa}^{ik} - s} \sum_{j_{sa} = j_{ik} - j_{sa}^{ik} - j_{sa}}^{j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa}}$$

$$\sum_{j_{ik} = l_{sa} + n + j_{sa}^{ik} - D}^{n + j_{sa}^{ik} - s} \sum_{j_{sa} = j_{ik} - j_{sa}^{ik} - j_{sa}}^{j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa}} \sum_{j_i = j_{sa} + l_i - l_{sa}}^{j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa}}$$

$$\sum_{n_{is} + l_k (n_{is} = n + j_{sa}^{ik} - j_s + 1)}^{n} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - l_{k1}}^{j_s + 1}$$

$$\sum_{n_{sa} = n_{ik} + j_{ik} - j_{sa} - l_{k2}} \sum_{n_s = n_{sa} + j_{sa} - j_i - l_{k3}}$$

$$\frac{(n_i + j_{ik} - j_{sa} - j_{sa}^{ik} - j_{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j_{sa}^{ik} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

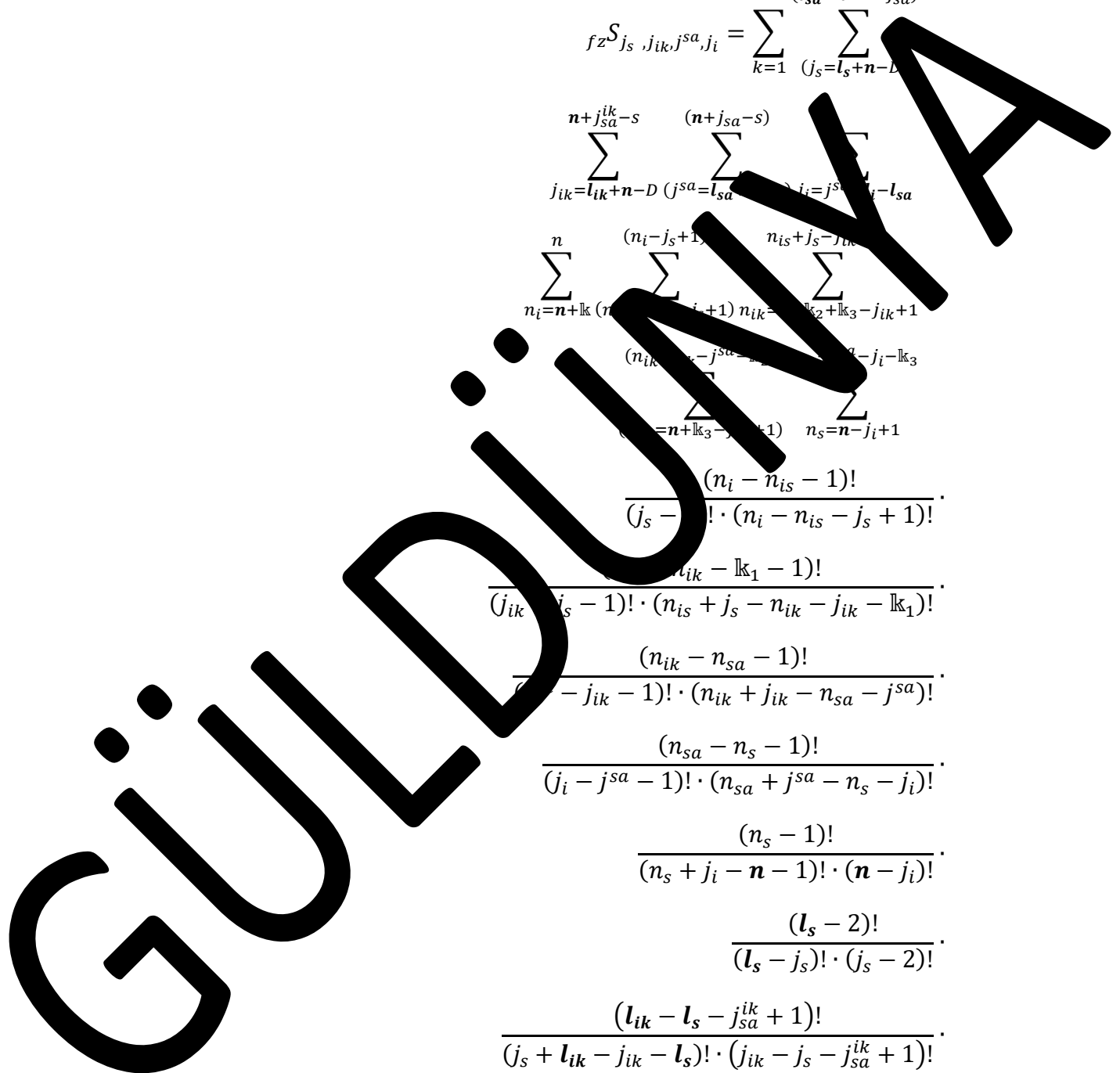
$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z^S j_s, j_{ik}, j_{sa}, j_i = \sum_{k=1}^{(l_{sa}+n-D-j_{sa})} \sum_{(j_s=l_s+n-D)}^{(n+j_{sa}^i-s)} \sum_{j_{ik}=l_{ik}+n-D}^{(n+j_{sa}-s)} \sum_{(j_{sa}=l_{sa})}^{(n_i=j_{sa}^i-l_{sa})} \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i+j_s-j_{ik})} \sum_{(n_{is}=n-k_2+k_3-j_{ik}+1)}^{(n_{is}+j_s-j_{ik})} \sum_{(n_{ik}=n-k_2+k_3-j_{ik}+1)}^{(n_{ik}-j_{sa}-j_i-k_3)} \sum_{(n_s=n-k_3-j_i+1)}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$



$$\begin{aligned}
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(n-s+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{n+j_{sa}^{ik}-s} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n+j_{sa}-s)} \sum_{j_i=j_{sa}+l_i-l_{ik}}^{(n+j_{sa}-s)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}^{ik})} \sum_{n_s=n-j_i+1}^{n_{sa}+j_s-j_{ik}-l_{k_1}} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^k)!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_{sa} - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=1}^{(n-s+1)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(n-s+1)}
 \end{aligned}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{\binom{()}{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{\binom{()}{n_i=n+k-j_s+1}} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}$$

$$\sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{\binom{()}{n_i+j_{ik}+j_{sa}-j^{sa}-s-k_1-k_2-j_s}!}{(n_i-n-k_1-k_2-k_3)! \cdot (n+j_{ik}+j_{sa}-j^{sa}-s-k_1-k_2-j_s)!} \cdot \frac{(l_s-2)!}{(l_s-j_s-1)! \cdot (j_s-2)!} \cdot \frac{(D-j_s-1)!}{(D+j_{ik}+j_{sa}-j^{sa}-s-k_1-k_2-j_s)! \cdot (n-j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik}^{ik} \leq j_{ik} \leq j_s + j_{sa} - j_{sa}^{ik} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge j^{sa} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge l = k_1 + 0 \wedge$

$j_s = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{ \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^{ik}, k_3, j_{sa}^{ik} \}$

$\geq 5 \wedge l_s = s + k \wedge$

$k_z: z = 3 \wedge k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{()}{j^{sa}=j_{sa}+1}} \sum_{j_i=s+1}^{\binom{()}{j_i+j_{sa}-s}} l_{sa}+j_{sa}-s$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_k+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - n_{i_s} - 1)!}{(j_i - j^{s_a} - 1)! \cdot (n_{s_a} + j_i - n_{i_s} - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} - l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{\binom{D}{j_s}} \\
 & \sum_{j_{i_k}=j^{s_a}+l_{i_k}-l_{s_a}}^{(l_{s_a})} \sum_{(j^{s_a}=j_{s_a}+1)}^{(l_{s_a})} \sum_{j_i=l_{s_a}+j_{s_a}-s+1}^{l_i} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_k+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_i - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{( )} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{( )} \sum_{j_i=s+1}^{l_{sa}+j_{sa}-s} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

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$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{ik}, j_i} &= \sum_{k=1}^{\binom{()}{j_s}} (j_s - k) \sum_{j_{ik}=j^{sa}+l_{ik}}^{n} \sum_{j_{sa}=j_{sa}+1}^{n} \sum_{j_i=s+1}^{n} l_{ik} + j_{sa}^{ik} - s \\ &= \sum_{j_{ik}=j^{sa}+l_{ik}}^{n} \sum_{j_{sa}=j_{sa}+1}^{n} \sum_{j_i=s+1}^{n} (n_{is} + j_s - j_{ik} - \mathbb{k}_1) \\ &= \sum_{j_{ik}=j^{sa}+l_{ik}}^{n} \sum_{j_{sa}=j_{sa}+1}^{n} \sum_{j_i=s+1}^{n} (n_{is} = n + \mathbb{k} - j_s + 1) \sum_{n_{ik}=n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\ &= \sum_{(n_{sa}=n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\ &= \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &= \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\ &= \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ &= \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\ &= \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\begin{aligned}
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{\binom{()}{j_s=j_s+l_{ik}}} \sum_{l_s=l_{ik}}^{\binom{()}{l_s=l_{ik}}} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}}^{\binom{()}{j_{ik}=j^{sa}+l_{ik}}} \sum_{j^{sa}=j^{sa}+l_{ik}}^{\binom{()}{j^{sa}=j^{sa}+l_{ik}}} \sum_{l_{ik}=l_{ik}+j^{sa}-s+1}^{\binom{()}{l_{ik}=l_{ik}+j^{sa}-s+1}} \\
 & \sum_{n_i=n+l_{ik}}^{\binom{()}{n_i=n+l_{ik}}} \sum_{n+l_{ik}-j_s+1}^{\binom{()}{n+l_{ik}-j_s+1}} \sum_{j_{ik}=n+l_{ik_2}+l_{k_3}-j_{ik}+1}^{\binom{()}{j_{ik}=n+l_{ik_2}+l_{k_3}-j_{ik}+1}} \\
 & \sum_{n_{sa}=n+l_{k_3}-j^{sa}-l_{k_1}}^{\binom{()}{n_{sa}=n+l_{k_3}-j^{sa}-l_{k_1}}} \sum_{n_{sa}+j^{sa}-j_i-l_{k_3}}^{\binom{()}{n_{sa}+j^{sa}-j_i-l_{k_3}}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{\binom{()}{n_{sa}=n+l_{k_3}-j^{sa}+1}} \sum_{n_s=n-j_i+1}^{\binom{()}{n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -
 \end{aligned}$$

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$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{( )} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{( )} \sum_{j_i=s+l_{ik}+j_{sa}^i-s}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-l_{k_1}}^{( )}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}-l_{k_3}-j_{sa}^i)}^{( )} \sum_{(n_s=n_{sa}+j^{sa}-j_i)}^{( )}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - l_{k_2} - l_{k_3} - j_{sa}^i)!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n_{ik} + j_{sa}^i - j^{sa} - l_{k_2} - l_{k_3} - j_{sa}^i)!} \cdot \frac{(l_s - 2)!}{(j_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i = 2 + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^i + 1 \wedge j_s + j_{sa}^i - 1 \leq j_{ik} \leq n - a + j_{sa}^i - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^i - j_{sa}^i \leq j_{ik} < j_i + j_{sa} - s \wedge j_{sa}^i - j_{sa} \leq j_i \leq n \wedge$$

$$l_{k_1} - j_{sa}^i + 1 \leq l_{k_1} \wedge l_{sa} + j_{sa}^i - j_{sa} - l_{k_1} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq 5 < n \wedge l = l_{k_1} + 0 \wedge$$

$$j_{sa}^i = j_{sa}^i - 1 \wedge j_{sa}^i = j_s - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_s^s, \dots, l_{k_1}, j_{sa}^i, \dots, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_{k_1} \wedge$$

$$l_{k_1}; z = 3 \wedge l_{k_1} = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}^i, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(j_i+j_{sa}-s)} \sum_{j_i=s+1}^{l_s+s-1} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{\binom{)}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{)}{}} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-1)} \sum_{j_i=l_s+s}^{l_i} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_i + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n - j_i - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_i - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!}$$

$$\sum_{k=1}^{(\ )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{(\ )} \sum_{j_i=s+1}^{l_s+s-1}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\ )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (\mathbf{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}.$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\sum_{j_i = j_s}^{S_{i_s, j_s}} j_i = \sum_{k=1}^{(\quad)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_{sa})} \sum_{(j^{sa} = j_{sa} + 1)}^{(l_{sa})} \sum_{j_i = j^{sa} + s - j_{sa}}^{l_i}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(l_i)!}{(D + j_i - n - l_i)! \cdot (j_i)!}$$

$$\sum_{j_s=1}^{(l_s)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(j_s+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}}^{(l_{sa})} \sum_{(j^{sa}=j_{sa}-2)}^{(l_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k}^{(n_i-j_{sa}-1)} \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_{sa}-1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{(n_i-j_{sa}-1)} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{sa} + j_{sa} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - j_{sa} - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = l > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

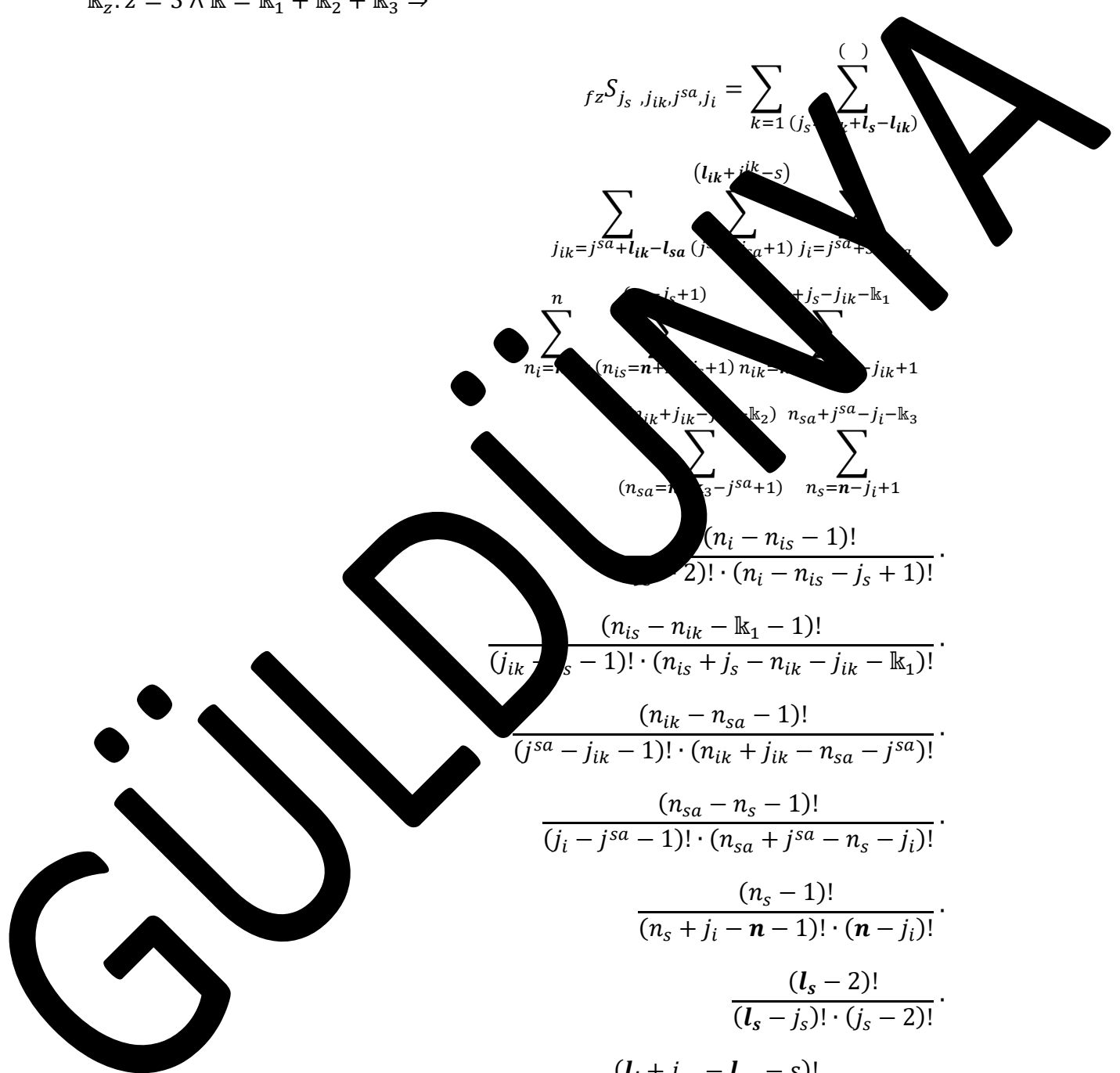
$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(j_s - j_{ik} + l_s - l_{ik})} \sum_{(l_{ik} + j_{ik} - s)}^{(j_{ik} + j_{sa} + 1)} \sum_{j_i = j_{sa} + s - j_{ik} - \mathbb{k}_1}^{(j_i + 1)} \sum_{n_i = n - (j_i + 1)}^{(n_{is} = n + j_i + 1)} \sum_{n_{ik} = n - j_{ik} + 1}^{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)} \sum_{(n_{sa} = n - j_{sa} + 1)}^{(n_{sa} + j_{sa} - j_i - \mathbb{k}_3)} \sum_{n_s = n - j_i + 1}^{(n_s - j_i + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_{ik} - j_{sa} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$





$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{sa}^{ik}-s)} \sum_{(j^{sa}=j_{sa}+1)} \sum_{j_i=j^{sa}+s-j_{ik}} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{( )} \sum_{(n_s=n_{sa}+j^{sa}-j_i)} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n_{ik} + j_{sa}^{ik} - j_{sa} - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq j_s + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{sa} \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq 5 < n \wedge I = l_{k_1} + l_{k_2} + l_{k_3} \wedge$$

$$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s \leq s + l_{k_1} \wedge$$

$$I: z = 2 \wedge l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}^{ik}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (j^{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = j_{ik} \wedge l_i + j_s - s > l_s \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{()}{}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+j_{sa}^{ik}-j_{sa}} \binom{()}{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(l_s - j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\ )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{k=j_{sa}^{ik}+1}^{l_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = j^{sa} + s - j_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\ )} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} & \sum_{j_{ik}=j_{sa}^{ik}+1}^{n+kk} \sum_{j_i=j_{sa}^{sa}+s-j_{sa}}^{n+kk} \sum_{j_s=j_{sa}^{sa}+s-j_{sa}}^{n+kk} \frac{(n_i - j_s)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\ & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\ & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \end{aligned}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_i)}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik}} \sum_{(j^{sa} = j_{ik} + l_{sa})}^{( )} \sum_{(j_i = j^{sa} + j_{sa} - j_{sa})}$$

$$\sum_{n_i = n + k}^n \sum_{(n_i - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} + j_s - j_{ik} - k_1)}$$

$$\sum_{(n_{sa} = n_{ik} + j^{sa} - k_2)}^{( )} \sum_{(n_{sa} + j^{sa} - j_i - k_3)}$$

$$\frac{(n_i + j_{ik} + j_{sa} + j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - k_2 - k_3)! \cdot (n + j_i + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i = D + s - 1 \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} + j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - k_1 + 1 = l_s + j_{sa}^{ik} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$- j_i \leq 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_2: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\frac{(n_{ik}+j_{ik}-j^{sa}-n_{sa}+j_i-l_{k_3})!}{(n_{sa}=n+l_{k_3}-j_{ik}+1)! \cdot (n_s=n-j_i+1)!} \cdot \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!}$$

$$\frac{(n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}}^{( )}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\ )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)}$$

$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i - n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s > 0 \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \cdot 5 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$

$\mathbb{k}_2: \mathbb{k}_2 = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \sum_{k=1} \sum_{(j_s=2)}^{(l_{sa}-j_{sa}+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\ )} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{i_s}+j_s-j_{ik}-\mathbb{k}_1}$$



$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (\mathbf{n} - j_i)!}$$

$$\frac{(l_s - 2)!}{(j_s - 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_s - l_{sa} - s)!}{(j^{sa} - l_s - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!}$$

$$\sum_{k=1}^{(l_{sa}-j_{sa}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{\binom{()}{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (\mathbf{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}.$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{k=1}^{l_{ik} - j_{sa}^{ik} + 1} \sum_{(j_s=2)}^{(l_{ik} - j_{sa}^{ik} + 1)} \sum_{k=j_s + l_{ik} - l_s}^{(j^{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = j^{sa} + s - j_{sa}}^{l_i} \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(l_i)!}{(D + j_i - n - l_i)! \cdot (j_i)!}$$

$$\sum_{k_1=0}^{(l_{ik} - j_{sa}^{ik})} \sum_{k_2=0}^{(j_s - 2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(j_s+l_{ik}-l_s)} \sum_{j_{ik}=j_s+l_{sa}-l_{ik}}^{(j_s+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}^{(j_s+l_{sa}-l_{ik})}$$

$$\sum_{j_i=n+k_1}^{(n_i - j_i - 1)} \sum_{(n_{is}=n+k_1-j_s+1)}^{(n_i - j_i - 1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{(n_i - j_i - 1)}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_i - j_i - 1)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}^{(n_i - j_i - 1)}$$

$$\frac{(n_i + j_i + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

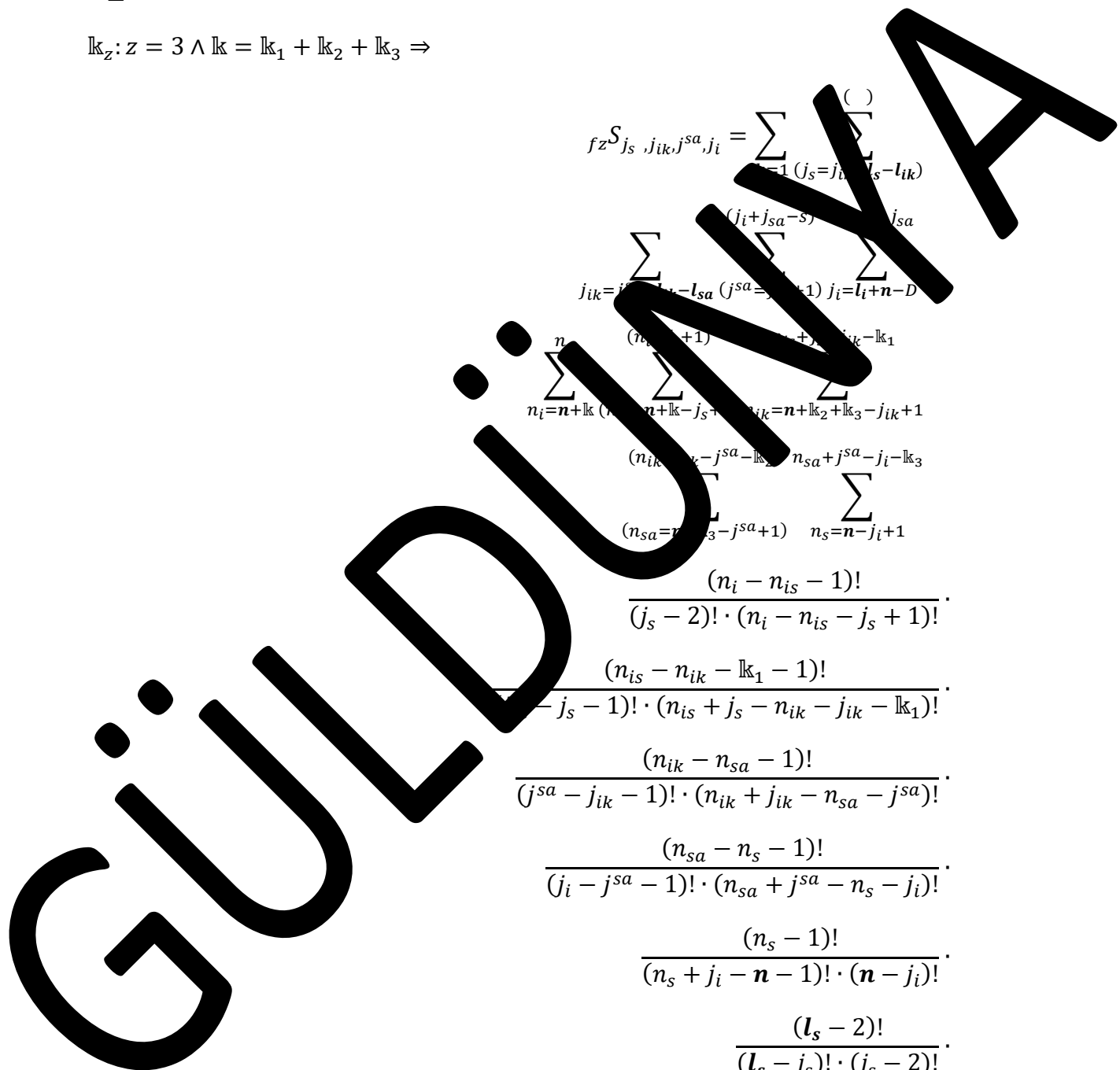
$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{i=1}^{(j_s)} \sum_{j_s=j_{ik}+j_{sa}-l_{ik}}^{(j_s)} \sum_{j_{ik}=i}^{(j_i+j_{sa}-s)} \sum_{j_{sa}=j_{ik}+1}^{j_{sa}} \sum_{n_i=n+\mathbb{k}}^{(n_i+1)} \sum_{n_i=n+\mathbb{k}-j_s+1}^{(n_i+1)} \sum_{j_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_i+1)} \sum_{n_{sa}=n+\mathbb{k}_3-j_{sa}+1}^{(n_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_{sa}+j_{sa}-j_i-\mathbb{k}_3)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$



$$\begin{aligned}
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa})} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{sa})} \sum_{j_i=l_{sa}+s-j_{sa}+1}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k-j_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{n_{sa}+j_s-j_i-l_{k_3}} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{( )} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{( )} \sum_{j_i=l_i+n-D}^{l_{sa}+s-j_{sa}}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\ )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i - n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s > 0 \wedge$

$D + s - n < l_i \leq D + l_s - n - 1 \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s \in \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k}$

$\mathbb{k}_z: z = 1 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(j_i+j_{sa}-s)} \sum_{j_i=l_i+n-D}^{l_{ik}+s-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{i_s}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=n+l_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_1 - 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - l_3 - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_{is} + j_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(n_{is} - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{ik} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{(j^{sa}=j_{sa}+1)}^{(n)} \sum_{j_i=l_{ik}+s-j_{sa}^{ik}+1}^{n} \\
 & \sum_{n_i=n+l_3}^n \sum_{(n_{is}=n+l_3-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_2+l_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_1} \\
 & \sum_{(n_{sa}=n+l_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}
 \end{aligned}$$

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$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 1)!}$$

$$\frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{(n_{is}=j^{sa}+l_{ik}-l_{sa})}^{( )} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{( )} \sum_{(j_i=l_i+n-D)}^{l_{ik}+s-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$



$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{ik}, j_i} &= \sum_{k=1}^{\binom{()}{j_s}} (j_i - s) \sum_{j_{ik}=j^{sa}+l_{ik}}^{l_s+s-1} \sum_{j_i=l_i+n-D}^{n} \\ &= \sum_{n_i=n+\mathbb{k}}^n (n_{is}=n+\mathbb{k}-j_s+1) \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ &= \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ &= \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\begin{aligned}
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_s, l_s=l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_s)} \sum_{(j_s=j_s+1)}^{( )} \sum_{j_i=l_s+1}^{( )} \\
 & \sum_{n_i=n+l_{ik}}^{( )} \sum_{(j_s=j_s)}^{( )} \sum_{n_{is}=j_{ik}-l_{k_1}}^{( )} \\
 & \sum_{(n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)}^{( )} \sum_{(n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1)}^{( )} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{( )} \sum_{n_s=n-j_i+1}^{( )} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_i - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -
 \end{aligned}$$

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$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{( )} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{( )} \sum_{j_i=l_i+n}^{l_s+s-1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa})}^{( )} \sum_{(n_s=n_{sa}+j^{sa}-j_{sa})}^{( )}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - k_2 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n_{ik} + j_{sa}^{ik} - j_{sa}^{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(j_s - 2)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j_i \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{sa} \leq j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D - n < l_i \leq D - l_s + s - 1 \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, \dots, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_i+n+j_{sa}-D-s-1)} \sum_{(j^{sa}=j_{sa}+1)}^n \sum_{j_i=l_i+n-D}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)!(j_s-n_{is}-j_{ik}-k_1)!} \cdot \\
 & \frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_{sa}-1)!(n_{is}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa})} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}
 \end{aligned}$$

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$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=\mathbf{n}-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}.$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(n - j_i - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{ik} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!}$$

$$\sum_{k=1}^{(\ )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{(l_{sa}) \\ (j^{sa}=l_i+\mathbf{n}+j_{sa}-D-s)}} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{\substack{(\ ) \\ (n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (\mathbf{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}.$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(l_i + n + j_{sa} - D - s - 1)} \sum_{(j^{sa} = j_{sa} + 1)}^{(n)} \sum_{j_i = l_i + n - D}^{n}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{l_i!}{(D + j_i - n - l_i)! \cdot j_i!} +$$

$$\sum_{j_{ik}=0}^{n_{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(l_{ik}+j_{sa})} \binom{(\cdot)}{j_s+l_s-l_{ik}}$$

$$\sum_{n+l_k}^{(n_i-j_s)} \sum_{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

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$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\ )} \sum_{(j_s = j_{ik} + l_s - l_i)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(l_{ik} + j_{sa} - j^{ik})} \sum_{(j^{sa} = l_i + n + j_{sa} - l_{sa} - j^{sa} - j_{sa})}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_i - j_s + 1)} \sum_{(n_i \mathbb{k}_1 + j_s - j_{ik} - \mathbb{k}_1)}$$

$$\sum_{(n_{sa} = n_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j^{ik})!}{(n_i - \mathbb{k}_2 - \mathbb{k}_1)! \cdot (n + j_i + j_{sa} - j^{sa} - s - j^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_s = D - n \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j^{ik} \leq j^{sa} \leq j^{sa} + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j^{ik} + 1 = l_s - j^{sa} + j_{sa} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1 \wedge$$

$$n - l_i \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$



$$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_i+n+j_{sa}-D-s-1)} \sum_{(j^{sa}=j_{sa}+1)}^{(l_i+n+j_{sa}-D-s-1)} \sum_{j_i=l_i+n-}^n$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}+j_{ik}-lk_1)}^{n_{is}+j_{ik}-lk_1}$$

$$\sum_{(n_{ik}+j_{ik}-lk_2)}^{n_{sa}+j_{ik}-lk_3} \sum_{(n_s-j^{sa}+1)}^{n_s} \sum_{n_s=n-j_i+1}^{n_s}$$

$$\frac{(n_i - n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - lk_1 + 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - lk_1)!}$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+s-j_{sa}}^n$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!}$$

$$\frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!}$$

$$\frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_s - n_{s_a} - j^{s_a})!}$$

$$\frac{(n_{s_a} - 1)!}{(j_i + j_s - 1)! \cdot (n_{s_a} + j_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(j_i + j_i - n_s + 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} - l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{\sum} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{(\ )}$$

$$\sum_{j_{i_k}=j^{s_a}+l_{i_k}-l_{s_a}} \sum_{(j^{s_a}=l_i+n+j_{s_a}-D-s)}^{(l_s+j_{s_a}-1)} \sum_{j_i=j^{s_a}+s-j_{s_a}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

$$\sum_{(n_{s_a}=n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})}^{(\ )} \sum_{n_s=n_{s_a}+j^{s_a}-j_i-l_{k_3}}$$

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$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \dots \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\ )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\ )}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_i + n + j_{sa}^{ik} - D - s - 1} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{(\ )} \sum_{j_i = l_i + n - D}^n$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(l_s - j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - j_{sa} - s)! \cdot (j_i + l_i - j^{sa} - s)!}$$

$$\frac{(D - j_i - n - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = l_i + j_{sa} - D - s}^{( )} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{j_i = j^{sa} + s - j_{sa}}^n$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

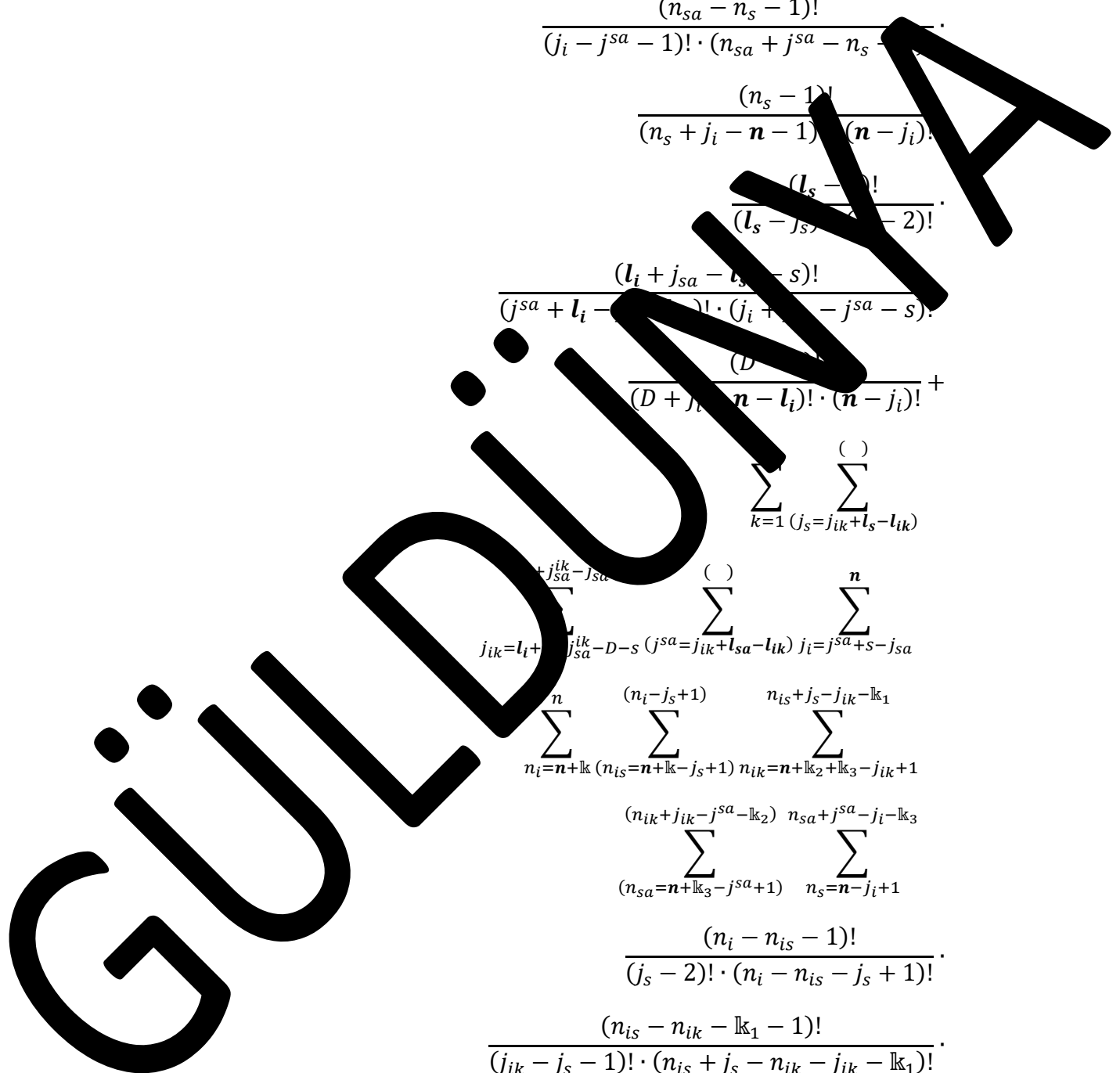
$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$



$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^n (j_s = j_{ik} + l_s)$$

$$\sum_{j_{ik}=l_i+n+j_s}^{l_{sa}+j_{sa}^{ik}-j_{sa}} (j^{sa} + l_{sa} - l_{ik}) j_{ik} = n - j_{sa}$$

$$\sum_{k_1=0}^n (n_{is} = n + j_s + 1) n_{ik} = n_{is} + j_s - j_{ik} - k_1$$

$$\sum_{k_2=0}^n (n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2) n_s = n_{sa} + j^{sa} - j_i - k_3$$

$$\frac{(n_i + j_{sa} + j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_i + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_{sa}^{ik} + l_s - l_s)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j_{sa}^{ik} + l_s - l_{ik})}^{(\cdot)} \sum_{j_i=l_i}^{n} \dots$$

$$\sum_{n_i=n}^{n} \sum_{(n_{is}=n+j_{sa}^{ik}+1)}^{(i+1)} \sum_{n_{ik}=n}^{n+j_s-j_{ik}-\mathbb{k}_1} \dots$$

$$\sum_{(n_{sa}=n-\mathbb{k}_3-j_{sa}^{ik}+1)}^{(i_k+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}^{ik}-j_i-\mathbb{k}_3} \dots$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa}^{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{ik})!}$$

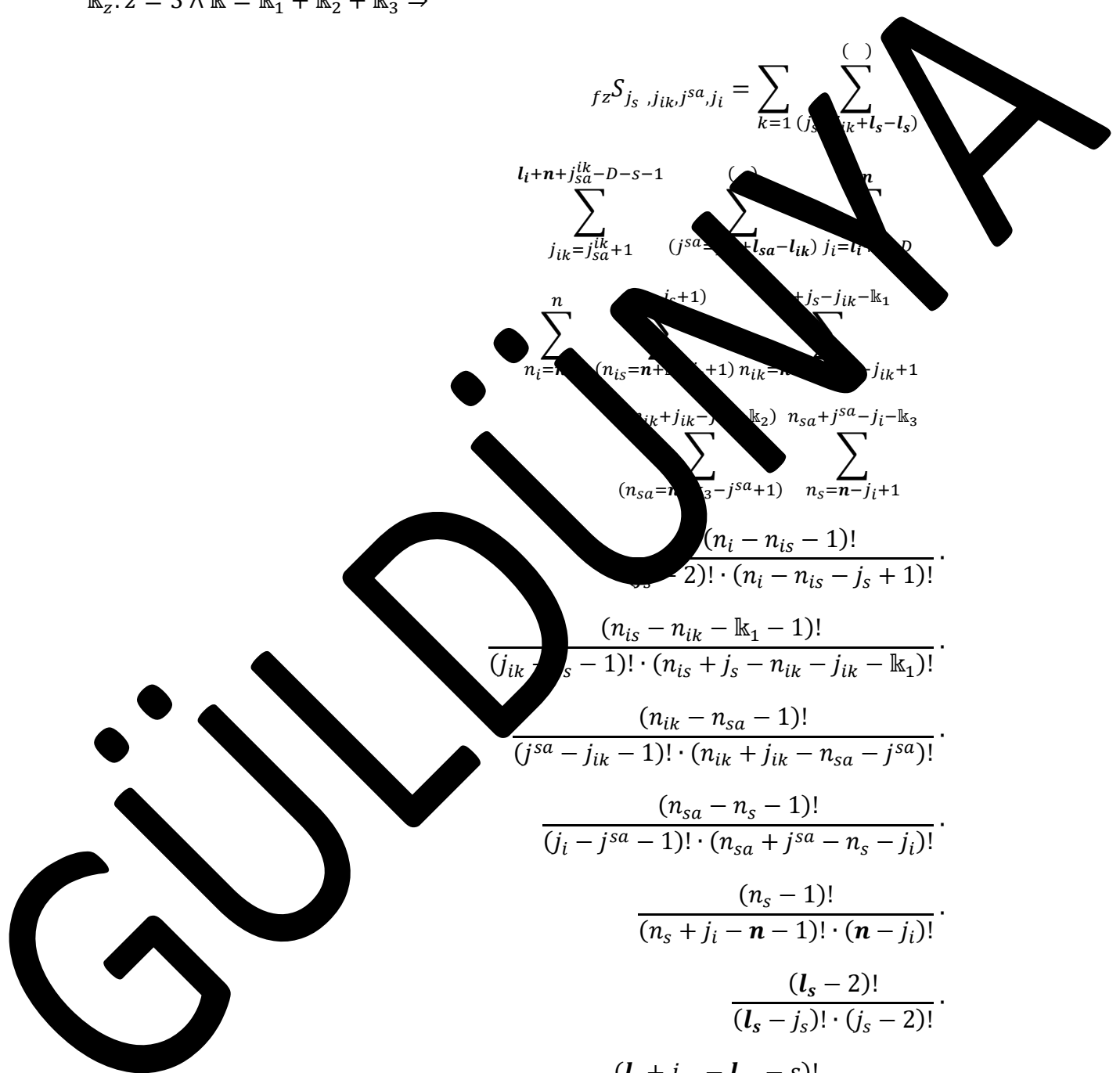
$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa}^{ik} - 1)! \cdot (n_{sa} + j_{sa}^{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa}^{ik} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa}^{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$



$$\sum_{k=1}^{\binom{D-l_i}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}} \sum_{j_i=j_{sa}+s-j_{sa}}^{\binom{D-l_i}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{sa}=j_{ik}+l_{sa}-l_{ik}}^{\binom{D-l_i}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_i=j_{sa}+s-j_{sa}}^{\binom{D-l_i}{j_s=j_{ik}+l_s-l_{ik}}}$$

$$\sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{n_{sa}=n+l_{k_3}-j_{sa}+1}^{(n_{ik}+j_{ik}-j_{sa})} \sum_{n_s=n-j_i}^{n_{sa}+j_{sa}-j_i-l_{k_3}} \frac{(n_i-n_{k_1}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!} \cdot \frac{(n_{ik}+n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_{sa}-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{\binom{D-l_i}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}} \sum_{j_i=j_{sa}+s-j_{sa}}^{\binom{D-l_i}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{sa}=j_{ik}+l_{sa}-l_{ik}}^{\binom{D-l_i}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_i=j_{sa}+s-j_{sa}}^{\binom{D-l_i}{j_s=j_{ik}+l_s-l_{ik}}}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\ )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i - n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s > 0 \wedge$

$D + s - n < l_i \leq D + l_s - n - 1 \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s \in \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k}_z$

$\mathbb{k}_z: z = 1 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\ )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\ )} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$



$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - k_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot (n - j_i)! \\
 & \frac{(l_s - 2)!}{(j_s - 2)!} \cdot \\
 & \frac{(l_i + j_i - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{l_s} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}
 \end{aligned}$$

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$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(l_s - j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_s - s)!}{(j^{sa} + l_i - 1)! \cdot (j_i + l_i - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=l_i+1}^{j_{ik}+j_{sa}^{ik}-1} \sum_{j_{sa}^{ik}-D-s}^{( )} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{sa}, j_{sa}^{ik}, j_i} = \sum_{k=1}^{l_i+n-D-s} \sum_{j_s=2}^{n} \sum_{j_s+l_{ik}-l_s}^{n} \sum_{j_{ik}=j_{ik}+l_{sa}-l_{ik}}^{n} \sum_{j_i=l_i+n-D}^{n} \sum_{n_i=l_i+l_{ik}-j_s-1}^{n} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{n} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n} \sum_{n_{sa}=n+\mathbb{k}_3-j_{sa}+1}^{n} \sum_{n_s=n-j_i+1}^{n} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\begin{aligned}
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(l_s - j_{sa} + 1)} \binom{l_s - j_{sa} + 1}{k} \cdot \frac{(j_s - k - 1)!}{(j_s - k)!} \cdot \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(j_s - k - 1)} \binom{j_s - k - 1}{j_{ik}} \cdot \sum_{j_i=j^{sa}+s-j_{sa}}^{(j_s - k - 1 - j_{ik})} \binom{j_s - k - 1 - j_{ik}}{j_i} \cdot \\
 & \sum_{n_i=n+l_{ik}}^n \binom{n}{n_i} \cdot \sum_{n_{is}=n_{ik}-l_{k_1}}^{n_{is}} \binom{n_{is}}{n_{ik}-l_{k_1}} \cdot \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{ik}} \binom{n_{ik}}{n+l_{k_2}+l_{k_3}-j_{ik}+1} \cdot \\
 & \sum_{n_{sa}=n_{ik}-j^{sa}}^{(n_{ik}-j^{sa})} \binom{n_{ik}-j^{sa}}{n_{sa}} \cdot \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \binom{n_{sa}+j^{sa}-j_i-l_{k_3}}{n_s} \cdot \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\sum_{k=1}^{(l_{sa}-j_{sa}+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-j_{sa}+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{( )} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+s-j_{ik}}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-l_{k_1}}^{( )}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa})}^{( )} \sum_{(n_s=n_{sa}+j^{sa}-j_{sa})}^{( )}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - l_{k_2} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n_{is} + j_{sa}^{ik} - j_{sa}^{ik} - j_{sa}^{ik})! \cdot (n_{ik} + j_{sa}^{ik} - j_{sa}^{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j_{ik} \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{k_1} - j_{sa}^{ik} + 1 \leq l_{k_2} \leq l_{sa} - j_{sa}^{ik} - j_{sa} - l_{k_3} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D - n < l_i \leq D - l_s + s - 1 \wedge$$

$$D \geq n < n \wedge l = l > 1 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, \dots, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_k \wedge$$

$$l_{k_2}: z = 3 \wedge l_k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{( )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} (j^{sa}) \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=l_i+n-D}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{(n_{sa}+j^{sa}-j_i)}^{(n_{sa}+j^{sa}-j_i)} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \\
 & \frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{is}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_{is}+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{(l_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_i+n-D-s+1)}^n$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} (j^{sa}) \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\sum_{(n_{sa}=n+l_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_1 - 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - l_2 - 1)!}$$

$$\frac{(n_s - 1)!}{(n_{is} + j_i - l_2 - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(n_{is} - j_s - 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{ik} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_s - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(l_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{( )} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_3}^n \sum_{(n_{is}=n+l_3-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_1 - l_2 - l_3 - j_{sa}^{ik})!}{(n_i - n - l_1 - l_2 - l_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$



$$\begin{aligned}
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{l_i!}{(D + j_i - n - l_i)! \cdot (j_i)!} + \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_s)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(l_s)} \sum_{n_{is}=n+l_{ik}-j_s+1}^{(l_s)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{(l_s)} \\
 & \frac{(n_i - j_s)!}{(n_{sa}=n+l_{k_3}-j^{sa}+1)} \frac{n_{is}+j_s-j_{ik}-l_{k_1}}{\sum_{n_s=n-j_i+1}^{(l_s)}} \\
 & \frac{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}{\sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}} \frac{n_{sa}+j^{sa}-j_i-l_{k_3}}{\sum_{n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}
 \end{aligned}$$

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$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=l_i+n-D-s+}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{( )} \sum_{(j^{sa}=j_{ik}+l_{sa}}^{( )} \sum_{(j_i=j^{sa}-j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+}^{(n_i-j_s+} \sum_{(n_{ik}=n_i+1)}^{(n_{ik}=n_i+1)} \sum_{(j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n_{ik}-j^{sa}-l_{k_2}}^{( )} \sum_{(n_{sa}=n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - j_s - l_{k_2} - l_{k_3})! \cdot (n + j_i + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i = D + s - 1 \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - l_{k_2} + 1 = j_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_i = j_i \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$l_{k_2}: z = 3 \wedge k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$\begin{aligned}
 f_{zS} \mathcal{S}_{j_s, j_{ik}, j_{sa}, j_i} &= \sum_{k=1}^{(\quad)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\quad)} \\
 &\sum_{j_{ik} = j_{sa}^{ik} + 1}^{j_{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j_{sa} = j_i + l_{sa} - l_i)}^{(\quad)} \sum_{j_i = s + 1}^{l_{ik} + j_{sa}^{ik} - s} \\
 &\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 &\frac{(n_{ik} + j_{ik} - j_{sa}^{ik} - j_{sa} + j_i - k_3)}{(n_{sa} = n + k_3 - j_{sa} + 1) \cdot (n_s = n - j_i + 1)} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 &\cdot \frac{(n_{ik} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 &\cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa}^{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^{ik})!} \\
 &\cdot \frac{(n_{sa} - n_s - 1)!}{(j_{sa}^{ik} - j_{sa} - 1)! \cdot (n_{sa} + j_{sa}^{ik} - n_s - j_i)!} \\
 &\cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &\cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 &\cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa}^{ik} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 &\cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=1}^{(\quad)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\quad)} \\
 &\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik}} \sum_{(j_{sa} = j_i + l_{sa} - l_i)}^{(\quad)} \sum_{j_i = l_{ik} + j_{sa}^{ik} - s + 1}^{l_i}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j^{s_a} - j_s - 1)! \cdot (n_{s_a} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})^{j^{s_a} - l_{i_k}} \cdot (j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{( )} \\
 & \sum_{j_{i_k}=j^{s_a}+j_{s_a}^{i_k}-j_{s_a}}^{( )} \sum_{(j^{s_a}=j_i+l_{s_a}-l_i)}^{( )} \sum_{j_i=s+1}^{l_{i_k}+j_{s_a}^{i_k}-s} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})}^{( )} \sum_{n_s=n_{s_a}+j^{s_a}-j_i-l_{k_3}}^{( )}
 \end{aligned}$$

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$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_i)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=s+1}^{l_s+s-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 2)!}{(l_s - j_s) \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{lk} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (n_{sa} + j_{sa}^{lk} - j_{sa} - l_{sa})!} \cdot$$

$$\frac{(n - l_i)!}{(n - l_i) \cdot (n - j_i)!} \cdot$$

$$\sum_{j_s=1}^{l_s} \sum_{j_s=j_{ik}+l_s-l_{ik}}$$

$$\sum_{j_{sa}=1}^{l_s+j_{sa}^{lk}} \binom{l_s}{j_{sa}} \sum_{j_i=l_s+s}^{l_i}$$

$$\sum_{n+l_k}^{(n_i-j_s+1)} \sum_{n_{is}=n+l_k-j_s+1}^{n_{is}+j_s-j_{ik}-l_{k1}} \sum_{n_{ik}=n+l_{k2}+l_{k3}-j_{ik}+1}$$

$$\sum_{(n_{sa}=n+l_{k3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - l_{k1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k1})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \sum_{(j_{ik}=j_s-j_{sa}^{ik}-j_{sa})}^{( )} \sum_{(j_{sa}^{ik}=l_{sa}-l_i)}^{( )} \sum_{(j_i=s+1)}^{( )} \sum_{(n_i=n+l_{ik})}^{( )} \sum_{(n_i=n+l_{ik}-j_s)}^{( )} \sum_{(n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1})}^{( )} \sum_{(n_s=n_{ik}+j_{ik}-l_{k_2})}^{( )} \sum_{(n_s=n_{sa}+j_{sa}-j_i-l_{k_3})}^{( )} \frac{(n_i + j_{ik} + j_{sa} - j_{sa}^{ik} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j_{sa}^{ik} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$

$$\begin{aligned}
 f_z S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \\
 &\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{ik}+j_{sa}^{ik}-s)} \sum_{j_i=j^{sa}+l_i-l_s} \\
 &\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+lk-j_{ik}+1}^{n_{is}+j_s-l_{ik}-lk_1} \\
 &\sum_{(n_{ik}+j_{ik}-l_{ik}-lk_2)}^{(n_{ik}+j_{ik}-l_{ik}-lk_2)} \sum_{(j^{sa}+1)}^{n_{sa}+j^{sa}-lk_3} \sum_{(n-j_i+1)} \\
 &\frac{(n_i - n_{is})}{(j_s - 2) \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 &\frac{(n_{is} - j_{ik} - lk_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - lk_1)!} \cdot \\
 &\frac{(n_{is} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 &\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 &\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}} \sum_{(l_{sa})}^{(j_{sa}=l_{ik}+j_{sa}^{ik}-s+1)} \sum_{j_i=j_{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{i_1}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-l_{k_1}} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_{is}-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}+n_{sa}-1)!}{(j_{sa}-j_{ik}-1)!(n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{ik}+j_{sa}^{ik}-s)} \sum_{(j_{sa}=j_{sa}+1)} \sum_{j_i=j_{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - l_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{sa})! \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \\
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_s + j_{sa} - 1} \sum_{(j^{sa} = l_s + j_{sa})}^{(l_{sa})} \sum_{j_i = j^{sa} + l_i - l_{sa}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1)}^{(n_{is} + j_s - j_{ik} - \mathbb{k}_1)} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
 \end{aligned}$$

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$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{s=1}^n (j_s = j_{ik} + l_s - 1)$$

$$\sum_{j_{ik} = \dots}^n \sum_{j_{sa} = j_{sa} + 1}^{l_s + j_{sa} - 1} \sum_{j_i = \dots}^{l_i - l_{sa}}$$

$$\sum_{n + \mathbb{k}_1}^n (n_{is} = n + \dots) \sum_{j_s + 1}^{j_s + 1} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{n_{sa} = n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2}^{n_{sa} = n_{sa} + j_{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i + j_{sa} + j_{sa}^{ik} - j_{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \dots - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j_{sa}^{ik} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}} \sum_{(j_{sa}=j_{ik}+j_{sa}^{ik})}^{(l_{sa})} \sum_{j_i=j_{sa}^{ik}-l_{sa}}^{(n_i-l_{sa})}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n_{is}+j_s-j_{ik}}^{(n_{is}+j_s-j_{ik})}$$

$$\sum_{(n_{ik}=n_{ik}+k_2+k_3-j_{ik}+1)}^{(n_{ik}+k_2+k_3-j_{ik}+1)} \sum_{(n_{ik}-j_{sa}-k_2)}^{(n_{ik}-j_{sa}-k_2)}$$

$$\sum_{(n_s=n+k_3-j_{sa}+1)}^{(n_s=n+k_3-j_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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$$\sum_{k=1}^{\binom{D}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{\binom{D}{j_i=j_{sa}+l_i-l_{ik}}} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}}^{\binom{D}{j_{ik}=j_{ik}-l_{k_1}}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2})}^{\binom{D}{n_s=n_{sa}+j_{sa}-j_{sa}^{ik}}} \frac{(n_i + j_{ik} + j_{sa} - j_{sa}^{ik} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n_{ik} + j_{sa}^{ik} - j_{sa} - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(j_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i = 2 + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j_{ik} \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_{sa}^{ik} \wedge l_{sa}^{ik} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = l_{k_1} = 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^{ik}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_k \wedge$$

$$z = 2 \wedge k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\binom{D}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{(j_i=j_{sa}+l_i-l_{ik})}^{\binom{D}{j_{ik}=j_{ik}-l_{k_1}}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa})} \sum_{j_i=j_{sa}^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-l_{k_1}} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_i-n_{ik}-l_{k_1})!} \\
 & \frac{(n_{ik}+n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \\
 & \sum_{k=1}^{\sum} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\quad)} \sum_{j_i=j_{sa}^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j^{sa}, j_i}} = \sum_{k=1}^{(l_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{(j_i=j^{sa}+l_i-l_{sa})}^{(l_{sa})}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$



$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - j_{sa}^{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(l_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)} \\
 & \sum_{j_{ik}=n+l_{ik}-l_s}^{n} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n_i - j_s + 1)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i - j_s + 1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_{sa} - n_s - 1)!} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{j_i=j^{sa}+l_i-l_{sa}} \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{j_{sa}=n+k_3-j^{sa}+1} \sum_{j_s=1}^{(l_s)} \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{sa}=n+k_3-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(l_s)} \binom{l_s}{j_s = z}$$

$$\sum_{j_{ik} = j_s + l_{ik} - l_s} \binom{()}{j_{sa} = j_{ik} + j_{sa} - j_{sa}}$$

$$\sum_{n_i = n + k}^n \binom{(n_i - j_s + 1)}{n_{ik} = n_i + j_s - j_{ik} - k_1}$$

$$\binom{()}{(n_{sa} = n_{ik} + j_{sa} - k_2)} \sum_{n_{sa} = n_{sa} + j_{sa} - j_i - k_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - k_1 - k_2 - k_3)! \cdot (n + j_{sa} + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq 1 \wedge l_s \leq n - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_{sa} + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1 \wedge$$

$$l_i \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$

$$\begin{aligned}
 f_z S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \\
 &\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\quad)} \sum_{j_i=l_i+n-}^{l_{ik}+s-j_{sa}^{ik}} \\
 &\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}-lk_1}^{n_{is}+j_{ik}-lk_1} \sum_{j_{ik}+1}^{j_{ik}+1} \\
 &\sum_{(n_{ik}+j_{ik}-) \dots}^{(n_{ik}+j_{ik}-) \dots} \sum_{j^{sa}+1}^{n_{sa}+j^{sa}-lk_3} \sum_{=n-j_i+1}^{=n-j_i+1} \\
 &\frac{(n_i - n_{is})}{(j_s - 2) \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 &\frac{(n_{is} - j_{ik} - lk_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - lk_1)!} \cdot \\
 &\frac{(n_{is} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 &\frac{(n_{sa} - n_s - 1)!}{(n_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 &\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 &\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_{ik}+s-j_{sa}^{ik}+1}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}-1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_{is}-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_{is}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{( )} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_i+n-D}^{l_{ik}+s-j_{sa}^{ik}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} (n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$

$D + s - n < l_i \leq D + l_s + s - n - 1$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} = j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, \dots\} \wedge$

$s \geq 5 \wedge s = s + 1$

$k : z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_i+n-D}^{l_s+s-1}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{ik})! \cdot (l_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{\substack{l_s+j_{sa}^{ik}-1 \\ j_{ik}=j_{sa}^{lk}+1}}^{\binom{()}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{j_i=l_s+s}^n \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+\mathbb{k}-j_s+1)}} \sum_{\substack{n_{is}+j_s-j_{ik}-\mathbb{k}_1 \\ n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-\mathbb{k}_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_s}^{(j_s-1)} \sum_{j_i=l_i+n-D}^{(j_s-1)} \sum_{j_s=l_s-l_{ik}}^{(j_s-1)}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_s}^{(j_s-1)} \sum_{j_i=l_i+n-D}^{(j_s-1)} \sum_{j_s=l_s+l_{ik}}^{(j_s-1)}$$

$$\sum_{n_{ik}=n+l_k}^{(n_i-1)} \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{(n_i-1)}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_i-1)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}^{(n_i-1)}$$

$$\frac{(n_i + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - j_{sa}^{ik} - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$n > n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$



$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{i=1}^{\binom{()}{j_s=j_{sa}+j_{ik}-l_{ik}}} \sum_{j_{sa}=j_{sa}^i+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{j_{ik}=j_{sa}^{ik}+1}^{(l_{ik}+j_{sa}^{ik})} \sum_{n_i=n+\mathbb{k}}^{(n_i+1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_{is}+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{ik}+1)} \sum_{n_{sa}=n+\mathbb{k}_3-j_{sa}+1}^{(n_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_s+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\begin{aligned}
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}} \sum_{(j^{sa}=l_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{ik}}^{(n+j_{sa}-s)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{ik}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_s=n-j_i)}^{(n_{sa}+j_s-j_i-l_{k_3})} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \\
 & \frac{(n_{ik} + n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j^{sa} - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(l_{ik}+j_{sa}-j_{sa}^{ik})}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i - n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_i \geq l_{ik} \wedge l_{sa} + j_{sa} - s = \dots \wedge$$

$$D + s - n < l_i \leq D + l_s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$$

$$s \in \{j_{sa}^s, \dots, \mathbb{k}_1 - j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^s, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k}_z$$

$$\mathbb{k}_z: z = \dots \wedge \mathbb{k} = \mathbb{k}_1 + \dots + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\frac{\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - l_{k_1})!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - 1)!} \cdot \frac{(n - j_i)!}{(l_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{n_i=n+l_{k_3}}^n \sum_{(n_{is}=n+l_{k_3}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \frac{\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=l_s+j_{sa})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}}{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - l_s)!}{(j_{ik} + l_{sa} - j^{sa} - l_s - 1)! \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \\
 & \sum_{j_{ik}=j^{sa}+l_i-j_{sa}}^{n+j^{sa}-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{n+j^{sa}-1} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{n+j^{sa}-1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\cdot)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}^{(\cdot)} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} \binom{(\cdot)}{z} S_{j_s, j_{ik}, j_i} &= \sum_{k=1}^{\lfloor j_s, j_{ik}, j_i \rfloor} \binom{(\cdot)}{k} \\ l_i^{j_{sa}^{ik} - D - s - 1} & \sum_{j_{ik}=j_{sa}}^{j_{sa} + j_{sa} - s} \sum_{(j^{sa}=l_i + j_{sa} - D - s)}^{j_i = j^{sa} + l_i - l_{sa}} \\ & \sum_{n_i=j_{sa} + \mathbb{k}}^n \sum_{(n_{is}=n + \mathbb{k} - j_s + 1)}^{(n_{is} + j_s - j_{ik} - \mathbb{k}_1)} \\ & \sum_{(n_{sa}=n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{sa} + j_{sa} - j_i - \mathbb{k}_3)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\ & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\begin{aligned}
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(j_s)} \sum_{s=l_s-l_s}^{(j_s)} \cdot \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-(j^{sa}=j_{ik}+j_{sa}-j_i=j^{sa}+l_i-l_{sa})}^{l_{ik}} \sum_{(n+l_i-s)}^{(n+l_i-s)} \cdot \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i+l_k+1)}^{(n_i+l_k+1)} \sum_{(n_i+l_k-l_{k_1})}^{(n_i+l_k-l_{k_1})} \cdot \\
 & \sum_{(n_{ik}=n+l_k-j_s+l_{k_1}-j_{ik}+1)}^{(n_{ik}=n+l_k-j_s+l_{k_1}-j_{ik}+1)} \sum_{(n_{sa}=n+l_k-j_s+l_{k_1}-j_{ik}+1)}^{(n_{sa}=n+l_k-j_s+l_{k_1}-j_{ik}+1)} \cdot \\
 & \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)} \cdot \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\sum_{k=1}^{\binom{D}{l_i}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D-l_i}{j_s}} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{\binom{D-l_i}{j_s}} \sum_{j_i=j^{sa}+l_i-l_{ik}}^{\binom{D-l_i}{j_s}} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-l_{k1}}^{\binom{D-l_i}{j_s}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{\binom{D-l_i}{j_s}} \sum_{n_s=n_{sa}+j^{sa}-j_i}^{\binom{D-l_i}{j_s}} \frac{(n_i+j_{ik}+j_{sa}-j^{sa}-l_{k2}-l_{k3}-j_{sa}^{ik})!}{(n_i-n-l_{k1}-l_{k2}-l_{k3})! \cdot (n_{ik}+j_{sa}-j^{sa}-j_{sa}^{ik})!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D-j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s = D - n + 1 \wedge 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - j_{sa} \leq j_i \leq n \wedge l_{ik} - j_{sa}^{ik} + 1 = l_{sa} \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge D + j_{sa}^{ik} - n < l_i \leq D - l_s + s - j_{sa}^{ik} - 1 \wedge$$

$$\geq n < n \wedge l = l_k > 0 \wedge j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge s: \{j_{sa}^s, \dots, j_{sa}^{ik}, l_{k2}, j_{sa}, l_{k3}, j_{sa}^i\} \wedge j_{sa}^s > 5 \wedge j_{sa}^s + l_k \wedge l_{kz}: z = 3 \wedge l_k = l_{k1} + l_{k2} + l_{k3} \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{\binom{D}{l_i}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D-l_i}{j_s}}$$



$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-k_1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}
 \end{aligned}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1 - 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{( )} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\begin{aligned}
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_s - 1)!}{(D + j_i - n - l_i)! \cdot (j_i - 1)!} + \\
 & \sum_{k=0}^{(l_{ik} - j_{sa}^{ik} + 1)} \sum_{l=0}^{D-s+1} \sum_{m=0}^{(n+l-s)} \sum_{n_{is}=n+l-k}^{(n+l-k-j_s)} \sum_{n_{ik}=n+l+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{n_{sa}=n+k_3-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}
 \end{aligned}$$

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$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(l_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_i + n - D - s + 1)}$$

$$\sum_{j_{ik} = j_s + l_{ik} - l_s}^{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})} \sum_{(j_{sa} = l_{sa} - l_{sa}^{ik})}$$

$$\sum_{n_i = n + k}^n \sum_{(n_i - j_s + 1)}^{(n_i - k)} \sum_{(n_{ik} = n_i - j_s - j_{ik} - k_1)}$$

$$\sum_{(n_{sa} = n_{ik} + j_{sa} - k_2)}^{(j^{sa} - k_2)} \sum_{(n_{sa} + j^{sa} - j_i - k_3)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - k_1 - k_2 - k_3) \cdot (n + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq n - 1 \wedge$$

$$1 \leq j_s < j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1 \wedge$$

$$D > n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz \mathcal{S}_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_s}^{(n+j_{sa}-s)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}+j_{ik}-\mathbb{k}_1)}^{(n_{is}+j_{ik}-\mathbb{k}_1)}$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(n_{sa}+j_{sa}-\mathbb{k}_3)}^{(n_{sa}+j_{sa}-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 + 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s)}$$

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$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(n+j_{sa}-s)} \sum_{j_i=j_{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}-l_{k_1}}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{n_{sa}=n+l_{k_3}-j_{sa}+1}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j_{sa}-j_i-l_{k_2}}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_{ik}-n_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{is}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{(l_s)} \sum_{j_s=l_i+n-D-s+1}^{(l_s)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{(\quad)} \sum_{j_i=j_{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} (n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - s - j_{sa} \leq j_s < n$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - j_{ik} \wedge l_i + j_s - s = l_s \wedge$

$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, \dots\} \wedge$

$s \geq 5 \wedge s = s + 1 \wedge$

$k : z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{()} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_{ik}+s-j_{sa}^{ik}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$



$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(D + l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{l_{ik}} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \\
 & \sum_{j_{ik} = j_{sa} + 1}^{l_{ik}} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{( )} \sum_{j_i = l_{ik} + s - j_{sa} + 1}^n \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{j_{ik}=0}^{(j_i - j^{sa} - 1)} \sum_{j_{sa}^{ik}=0}^{(j_{sa} - l_i)} \sum_{l_{ik}=0}^{(j_{sa} - l_i - j_{sa}^{ik})} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{(j_i - j^{sa} - 1)} \sum_{n+l_k}^{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{(n_{is}=n+l_k-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}^{(n_s=n_{sa}+j^{sa}-j_i-k_3)} \frac{(n_i + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - j^{sa} - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\begin{aligned} & \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \end{aligned}$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{j_{sa}} \sum_{(j_s=j_{ik})}^{(l_{ik})} \dots$$

$$\sum_{j_{ik}=j_{sa}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=l_{sa}-l_i)}^{(l_s+s-1)} \dots$$

$$\sum_{i=n+k}^n \sum_{(n_i=n+k)}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k_2+k_3-j_{ik}+1)}^{(n_{is}+j_s-j_{ik}-k_1)} \dots$$

$$\sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{sa}-k_2)} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j_{sa}-j_i-k_3)} \dots$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(\quad)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\quad)} \\
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_s + j_{sa}^{ik} - 1} \sum_{(j^{sa} = j_i + l_{sa})}^{(\quad)} \sum_{j_i = l_s + s}^n \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + k_2 + \dots + 1)}^{n_{is} + j_s - k_1} \\
 & \frac{(n_{ik} + j_{ik} - j^{sa} - \dots - n_{sa} + j^{sa} - j_i - \dots)}{(n_{sa} + k_3 - j_s - \dots - j_i + 1)} \dots \\
 & \frac{\dots - n_{is} - 1)!}{(j_i - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{is} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} - \\
 & \sum_{k=1}^{(\quad)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\quad)}
 \end{aligned}$$

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$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{\binom{()}{j_{sa}=j_i+l_{sa}-l_i}} \sum_{l_s+s-1}^{j_i=l_{sa}+n+s-D-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+k-j_s+1}} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}$$

$$\sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2}} \sum_{n_s=n_{sa}+j_{sa}-j_i-k_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - s - k_1 - k_2 - j_{sa})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j_{sa} - j_{sa} - j_{sa} - j_{sa})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - j_s - n - l_i)! \cdot (n - j_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_{sa} - s \wedge j_{sa} - j_{sa} - j_{sa} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} > l_{ik} \wedge l_{sa} - j_{sa} - s = l_{sa} \wedge$$

$$D + j_s - n < l_{sa} \wedge D + l_s + j_{sa} - n - 1$$

$$n < n \wedge k = k_1 + k_2 + k_3 > 0$$

$$j_{sa} - j_{sa}^i - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 < j_{sa}^{ik} - 1 \wedge$$

$$\{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}^{ik}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s - k_1 - k_2 - k_3$$

$$k_2 = s - k_1 - k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{\binom{(l_{ik}+j_{sa}-j_{sa}^{ik})}{j_{sa}=l_{sa}+n-D}} \sum_{j_i=j_{sa}+l_i-l_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})! \cdot j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}} \sum_{\substack{(n+j_{sa}-s) \\ (j^{sa}=l_{ik}+j_{sa}-j_{sa}^{ik}+1)}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}}$$

$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - j_{ik} - 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(l_s - 1)! \cdot (n_s - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{\binom{(\cdot)}{j_s = j_{ik} + l_s - l_{ik}}} \sum_{j_{ik} = j^{sa} + j_{sa} - j_{sa}}^{\binom{(\cdot)}{l_{ik} + j_{sa} - j_{sa}}} \sum_{j_i = j^{sa} + l_i - l_{sa}}^{\binom{(\cdot)}{l_{ik} + j_{sa} - j_{sa}}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{n_{is} = n + \mathbb{k} - j_s + 1}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{\binom{(\cdot)}{}} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz \rightarrow \sum_{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_i=j_{sa}+j_{sa}^{ik}-j_{sa}+j_{sa}-1} \sum_{j_{ik}=j_{sa}+1} \sum_{j^{sa}=l_{sa}+n-D} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$



$$\begin{aligned}
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(j_s)} \sum_{l=1}^{(l_s - l_{ik})} (j_s = j_{ik} + l) \cdot \\
 & \sum_{m=1}^{(l_s + j_{sa}^{ik} - 1 - j_{sa} - s)} (j_{sa} = l_s + j) \cdot \sum_{n=1}^{(j_i = j^{sa} + l_i - l_{sa})} \\
 & \sum_{n_i=n+l_k}^n \sum_{n_{ik}=n+l_k-j_s+l_{k_1}}^{(n_{ik}+1)} \sum_{n_{sa}=n+l_k+l_{k_2}-j_{ik}+1}^{(n_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_s+l_{k_3}-j_{ik}-l_{k_1})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

GÜLDÜZYA

$$\sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D}{j_s}} \sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{\binom{l_s+j_{sa}-1}{j_{sa}=l_{sa}+n-D}} \sum_{j_i=j_{sa}+l_i-l_{ik}}^{\binom{l_s+j_{sa}-1}{j_i=j_{sa}+l_i-l_{ik}}} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-l_{k_1}}^{\binom{n_i-j_s+1}{n_{ik}=n_{is}-j_{ik}-l_{k_1}}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2})}^{\binom{n_i-j_s+1}{n_{sa}=n_{sa}+j_{sa}-j_{ik}}} \frac{(n_i+j_{ik}+j_{sa}-j_{sa}^{ik}-l_{k_2}-l_{k_3}-j_{sa}^{ik})!}{(n_i-n-l_{k_1}-l_{k_2}-l_{k_3})! \cdot (n_{sa}+j_{sa}-j_{sa}^{ik}-j_{sa}^{ik})!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D-j_i-n-l_i)! \cdot (n-j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_s = D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_{k_1} - j_{sa}^{ik} + 1 \leq l_{k_2} \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D + l_{k_1} - n < l_{sa} \leq D + l_s + l_{k_1} - n - 1 \wedge$

$l_{k_1} \geq n < l_{k_1} \wedge l_{k_1} = l_{k_1} > 0$

$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$

$l_{k_2} \geq 5 \wedge l_{k_3} = s + l_{k_1} \wedge$

$l_{k_2}: z = 3 \wedge l_{k_2} = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{D}{j_s}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-k_1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}
 \end{aligned}$$

GÜLDÜZMAYA

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_s + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{lk}-D-j_{sa}}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{( )} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_{k_1}}^n \sum_{(n_{is}=n+l_{k_1}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{lk})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{lk})!}$$

GÜLDEN

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{sa} + j_{sa}^{ik} - D - j_{sa} - 1} \sum_{(j^{sa} = l_{sa} + n - D)}^{(n + j_{sa} - s)} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\begin{aligned}
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \\
 & \frac{(n - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{j_{ik}=l_{sa}}^{l_s + j_{sa}^{ik} - 1} \sum_{j_{sa}=j_{sa}^{ik} - D - j_{sa}}^{(n + j_{sa}^{ik} - s)} \sum_{j_i=j^{sa} + l_i - l_{sa}}^{(n - j_s)} \sum_{j_{ik}=n + l_{k_2} + l_{k_3} - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - l_{k_1}} \\
 & \sum_{j_{ik}=n + l_{k_2} + l_{k_3} - j_{ik} + 1}^{(n_i - j_s)} \sum_{n_{ik}=n + l_{k_2} + l_{k_3} - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - l_{k_1}} \\
 & \sum_{(n_{sa}=n + l_{k_3} - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - l_{k_2})} \sum_{n_s=n - j_i + 1}^{n_{sa} + j^{sa} - j_i - l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

GUIDANCE

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-1} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{(j_{sa}^{ik}=l_{sa}-l_{sa})}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i=n+k)}^{(n_i-j_s+1)} \sum_{(j_s-j_{ik}-k_1)}$$

$$\sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}^{ik}-k_2)}^{( )} \sum_{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa}^{ik} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - k_1 - k_2 - k_3) \cdot (n + j_{sa} - j_{sa}^{ik} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq n - 1 \wedge$$

$$1 \leq j_{sa} - j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_{sa} + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} + j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - j_{sa}^{ik} \wedge l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D + j_{sa} - j_{sa}^{ik} \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_{sa}+n-D-j_{sa})} \sum_{(j_s=2)}^{(n+j_{sa}-s)} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_{sa}+n-D)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_s}^{(n+j_{sa}-s)}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik_2}+lk_2)}^{(n_{is}+j_{ik}-lk_1)} \sum_{(j_{ik}+1)}^{(n_{ik}+j_{ik}-lk_2)}$$

$$\sum_{(n_s=n-j_i+1)}^{(n_{sa}+j_{ik}-lk_3)} \sum_{(j_{ik}-j^{sa}+1)}^{(n_{sa}+j_{ik}-lk_3)} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j_{ik}-lk_3)}$$

$$\frac{(n_i - n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - lk_1 + 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - lk_1)!}$$

$$\frac{(n_{is} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(n_{sa} - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{lk} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(l_{ik}-j_{sa}^{lk}+1)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-j_{sa}^{lk}+1)}$$

GÜLDENWA



$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(n+j_{sa}-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}-l_{k_1}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_i-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_i+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=1}^{(l_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{( )} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}}$$

$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$

$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, \dots\} \wedge$

$s \geq 5 \wedge s = s + 1 \wedge$

$k : z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_{sa}+n-D-j_{sa})} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j^{sa} - l_{ik} - j^{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{ik})! \cdot (l_{sa} + j^{sa} - j_{ik} - j^{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n+j_{sa}-s)} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(n+j_{sa}-s)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{(l_s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{j_i=j^{sa}+l_i-l_{sa}} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(n_i - l_i - 1)} \sum_{n_{is}=n+l_k-j_s+1}^{(n_i - l_i - 1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}^{(n_i - l_i - 1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{(n_i - l_i - 1)} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}^{(n_i - l_i - 1)} \frac{(n_i + j_{sa} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - l_i - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$j_i > n - l_i \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{j_s=1}^{(j_s)} \sum_{j_{ik}=j_s-l_{ik}}^{(j_s)} \sum_{j_{sa}=j_{ik}+1}^{(j_i+j_{sa}-s)} \sum_{j_i=s+1}^{(j_i+j_{sa}-s)} \sum_{n_i=n+\mathbb{k}}^{(n_i+j_{sa}-s)} \sum_{n_{ik}=n+\mathbb{k}-j_s+1}^{(n_{ik}+1)} \sum_{n_{sa}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_s)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

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$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \\
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik}} \sum_{(j^{sa} = j_{sa} + 1)}^{(l_{sa})} \sum_{j_i = j_{sa}^{ik} - s + 1}^{l_i} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + k_2)}^{(n_{is} + j_s - k_1)} \\
 & \frac{(n_{ik} + j_{ik} - j^{sa})! \cdot (n_{sa} + j^{sa} - j_i - k_1)!}{(n_{sa} + k_3 - j_s)! \cdot (n_{ik} - j_i + 1)!} \cdot \frac{(n_{is} - 1)!}{(n_{is} - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - k_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

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$$\sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(\cdot)} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{(\cdot)} \sum_{j_i=s+l_{ik}+j_{sa}^{ik}-s}^{(\cdot)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}^{(\cdot)}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{sa})}^{(\cdot)} \sum_{(n_{sa}=n_{sa}+j^{sa}-j_i)}^{(\cdot)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - l_{sa} - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n_i + j_{sa} - j^{sa} - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq n + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_{sa} + j_{sa}^{ik} - j_{sa} \wedge l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k_1 + k_2 + k_3 \wedge$$

$$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, k_1, j_{sa}^{ik}, k_3, j_{sa}^{ik}\} \wedge$$

$$s \geq 5 \wedge s \geq k_1 + k_2 \wedge$$

$$k_3 = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=j_{sa}+1)}^{(j_i+j_{sa}-s)} \sum_{j_i=s+1}^{l_s+s-1} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_i}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-j_s-1)!(n_i-n_{ik}-j_{ik}-\mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)!(n_i+j_{ik}-n_{sa}-j_{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{\binom{(\ )}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(l_{sa})}^{(l_{sa})} \sum_{j_i=l_s+s}^{l_i}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})^{j^{sa} - l_{ik}} \cdot (j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(j_s)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \\
 & \sum_{j_{ik} = j^{sa} + j_{sa}^{ik} - j_{sa}}^{( )} \sum_{(j^{sa} = j_i + j_{sa} - s)}^{( )} \sum_{j_i = s+1}^{l_s + s - 1} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}
 \end{aligned}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} (n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} - j_{sa}^{ik} + 1$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s > l_s \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}\} \wedge$

$s \geq 5 \wedge s = s + k \wedge$

$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{ik}+j_{sa}^{ik}-s)} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - 1)! \cdot (j^{sa} + j_s - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_i - l_{sa} - 1)!}{(j^{sa} + l_i - l_{sa} - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D + l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik}} \sum_{(j^{sa} = l_{ik} + j_{sa}^{ik} - s + 1)}^{(l_{sa})} \sum_{j_i = j^{sa} + s - j_{sa}}^{l_i}$$

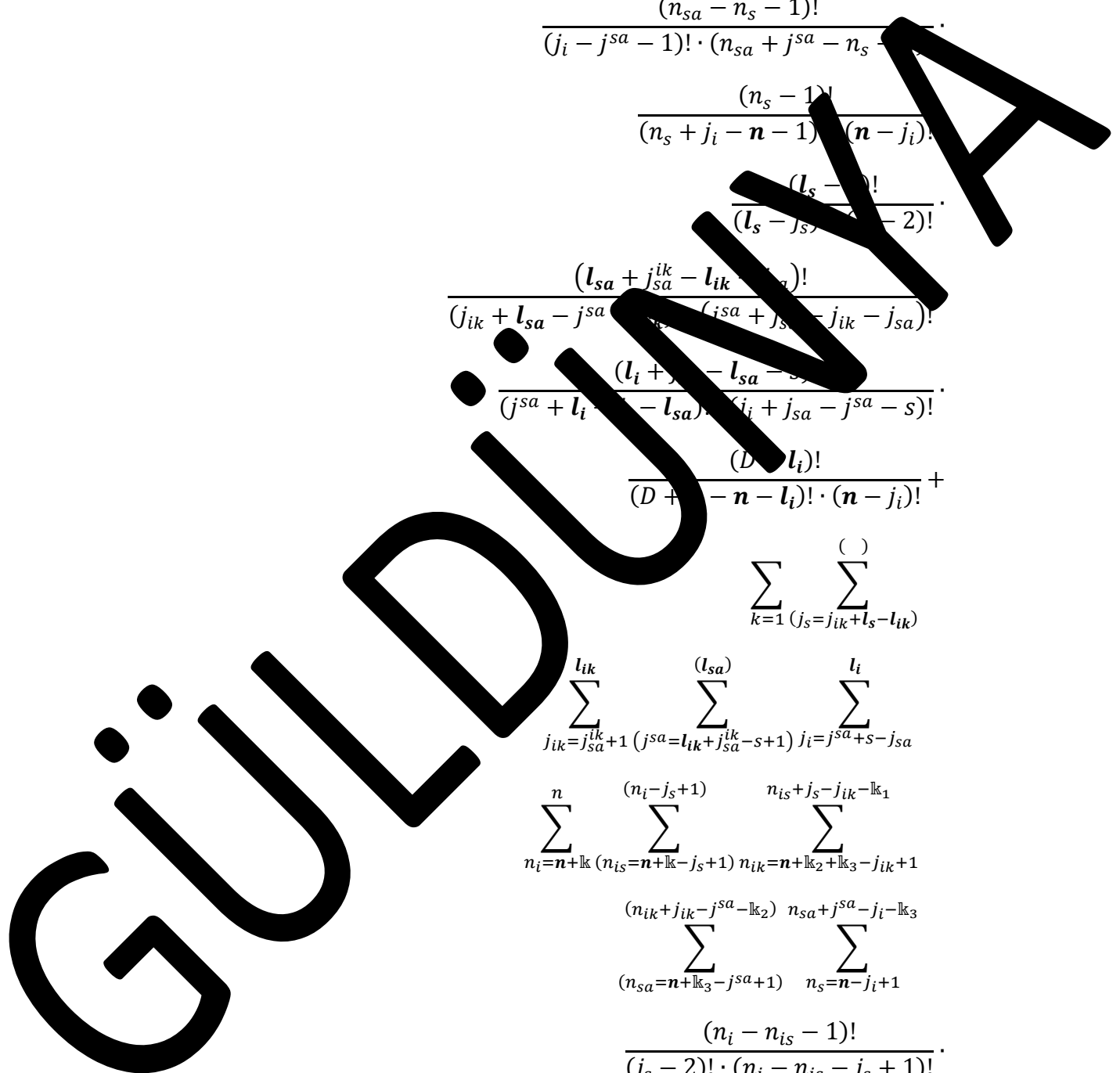
$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$



$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \sum_{j_{ik}=j_{sa}}^n \sum_{j_s=j_{ik}+l_s-l_{ik}}^{(l_{ik}+j_{sa}^{ik}-s)} \sum_{(j^{sa}=j_{sa}+1)}^{(n_i-j_s+1)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}^{(n_i-j_s+1)} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(l_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^j (j_s = j_{ik} \wedge l_{ik})$$

$$j_{sa} + j_{sa}^{ik} - j_{sa} (l_s + j_{sa}^{ik}) \quad l_i$$

$$\sum_{j_{ik}=j_{sa}^{ik}} (j_{sa} = j_{sa}^{ik} + s - j_{sa})$$

$$\sum_{n_i=j_s+1}^n (n_i - j_s + 1) \quad \sum_{n_{is}=n+k_1-j_s+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{ik}+j_{sa}-k_2} \quad \sum_{n_{sa}=n+k_3-j_{sa}+1}^{n_{sa}+j_{sa}-j_i-k_3}$$

$$\sum_{n_s=n-j_i+1}^{n_s-1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

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$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_i)}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_s + j_{sa}^{ik} - 1} \sum_{(j^{sa} = l_s + j_{sa}^{ik} - j_{sa})}^{(l_{sa})} \sum_{(j_i = j^{sa} - j_{sa})}^{l_i}$$

$$\sum_{n_i = n + k}^n \sum_{(n_i - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{is} + j_s - j_{ik} - 1)}^{(n_{is} + j_s - j_{ik} - 1)}$$

$$\sum_{(n_{ik} + j_s - j^{sa} - k_2)}^{(n_{ik} + j_s - j^{sa} - k_2)} \sum_{(j_i - k_3)}^{(j_i - k_3)} \sum_{(n_s = n - j_i + 1)}^{(n_s = n - j_i + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-1)} \sum_{(j_{sa}=j_{sa}+1)} \sum_{j_i=j_{sa}+s-j_{ik}}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-l_{k_1}}^{( )}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2})}^{( )} \sum_{(n_s=n_{sa}+j_{sa}-j_i)}^{( )}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n_{ik} + j_{sa} - j_{sa} - j_i - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i = 2 + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{ik} \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{k_1} - j_{sa}^{ik} + 1 = l_{k_1} \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_{k_1} + l_{k_2} + l_{k_3} \wedge$$

$$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s \leq s + l_{k_1} \wedge$$

$$l_{k_1}; z = 3 \wedge l_{k_1} = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}^{ik}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{lk}+1}^{l_{ik}} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{(l_{sa})} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i} \\
 & \sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+lk_2+lk_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-lk_1} \\
 & \sum_{(n_{sa}=n+lk_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-lk_2)} \sum_{n_s=j_i+1}^{n_{sa}+j_{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-lk_1-1)!}{(j_{ik}-j_s-1)!(n_{is}-n_{ik}-j_{ik}-lk_1)!} \cdot \\
 & \frac{(n_{ik}+n_{sa}-1)!}{(j_{sa}-j_{ik}-1)!(n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)!(n_{sa}+j_{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{lk}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{lk}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=1}^{\sum} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \\
 & \sum_{j_{ik}=j_{sa}^{lk}+1}^{l_{ik}} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{lk})}^{(\quad)} \sum_{j_i=j_{sa}+s-j_{sa}}^{l_i}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i - n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_i > l_{ik} \wedge l_{sa} - j_{sa} - s > \quad \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1, j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \cdot 5 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_{is} + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{lk}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}
 \end{aligned}$$

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$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_{sa})} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)!(j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - s)! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(l_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+l_s}^{(j_{ik}+l_{ik}-l_s)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)!(j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{i=1}^{(l_s)} \sum_{j=1}^{(j_s)} \sum_{i_{ik}=j_s+l_{ik}-l_s}^{(j_s+l_{ik}-l_s)} \sum_{i_{ik}=j_s+l_{ik}-l_s}^{(j_s+l_{ik}-l_s)} \sum_{j_i=j^{sa}+s-j_{sa}}^{(j_s+l_{ik}-l_s)} \sum_{i_{is}=n+k-j_s+1}^{(n_i-j_s)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-k_1)} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}+j^{sa}-j_i-k_3)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{(l_s)} \binom{l_s}{k}$$

$$\sum_{j_{ik}=j_s+l_{ik}-1}^{(j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})} \sum_{j_i=j_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_{ik}-1}^{(n+l_{ik}-j_s)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{n_s=n_{ik}+j_{sa}-l_{k2}}^{(n_{ik}+j_{sa}-l_{k2})} \sum_{n_s=n_{sa}+j_{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D - n + 1 \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{sa} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = l_{k1} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k1}, j_{sa}^{ik}, l_{k2}, j_{sa}, l_{k3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(j_i+j_{sa}-s)} \sum_{l_i=n-D}^{l_{ik}+s-j_s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_s+1)}^{(n_{ik}+j_s-j_i-\mathbb{k}_1)}$$

$$\frac{(n_{is}-n_{sa}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-\mathbb{k}_1-1)!}{(n_{is}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-\mathbb{k}_1)!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j_s^{sa}+j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa})} \sum_{j_i=l_{ik}+s-j_{sa}^{ik}}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{sa}+j_{ik}-j_i-k_3)} \sum_{(n_{sa}=n+k_3-j_{ik}+1)} \sum_{n_s=n-j_i} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}+j_s-j_{ik}-k_1)!} \\
 & \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-k_1)!} \\
 & \frac{(n_{ik}+n_{sa}-1)!}{(j^{sa}+j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-n_s-1)!}{(j^{sa}-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \\
 & \sum_{k=1}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}
 \end{aligned}$$

GÜLDENWA



$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{\binom{()}{j^{sa}=j_i+j_{sa}-s}} \sum_{l_{ik}+s-j_{sa}^{ik}}^{j_{sa}^{ik}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\binom{()}{n_{is}=n+l_k-j_s+1}}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}$$

$$\sum_{\binom{()}{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2})}} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k1} - l_{k2} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_s)!}{(D + j_{ik} + n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq j_s + j_{sa}^{ik} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + j_{sa} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} > l_{ik} \wedge l_{sa} + j_{sa} - s > l_{sa} \wedge$$

$$D + n - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D - n < n \wedge l_s - l_k > 0 \wedge$$

$$j_{sa} - j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$$

$$\{j_{sa}^{is}, j_{sa}^{ik}, j_{sa}^{ik}, l_{k2}, j_{sa}^{ik}, l_{k3}, j_{sa}^{ik}\} \wedge$$

$$s \geq 5 \wedge s = s - 1 \wedge$$

$$l_{k2} - l_k = s - l_k = l_{k1} + l_{k2} + l_{k3} \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{\binom{()}{j^{sa}=l_{sa}+n-D}}^{(j_i+j_{sa}-s)} \sum_{j_i=l_i+n-D}^{l_s+s-1}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_s - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j^{s_a} - j_s - 1)! \cdot (n_{s_a} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a})^{j^{s_a} - l_{i_k}} \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{\binom{()}{}} \sum_{(j_s=j_{i_k}+l_s-l_{i_k})}^{\binom{()}{}} \\
 & \sum_{j_{i_k}=j_{s_a}^{i_k}+1}^{l_s+j_{s_a}^{i_k}-1} \sum_{(j^{s_a}=l_{s_a}+n-D)}^{(l_{s_a})} \sum_{j_i=l_s+s}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}
 \end{aligned}$$

GÜLDÜSMEYAZ

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1 - 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot (n - j_i)! \\
 & \frac{(l_s - 2)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{( )} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{( )} \sum_{j_i=l_i+n-D}^{l_s+s-1} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}^{( )}
 \end{aligned}$$

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$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \dots \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\ )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{j_{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j_{sa} = l_{sa} + n - D)}^{(l_i + n + j_{sa} - D - s - 1)} \sum_{j_i = l_i + n - D}^n$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - 1)! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_i - l_{sa} - 1)!}{(j^{sa} + l_i - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D + l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{j^{sa} - j_{sa}^{ik} - j_{sa}} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{(l_{ik} + j_{sa} - j_{sa}^{ik})} \sum_{j_i = j^{sa} + s - j_{sa}}^n$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - l_s)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!} \cdot \\
 & \frac{(n - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{j_s=1}^{j_s} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{j_s} \\
 & \sum_{j_{ik}=j_{sa}^{l_{ik}}}^{l_{ik}} \sum_{j_{ik}=j_{sa}^{l_{ik}+j_{sa}-j_{sa}^{ik}+1}}^{l_{ik}+j_{sa}-j_{sa}^{ik}+1} \sum_{j_i=j_{sa}+s-j_{sa}}^n \\
 & \sum_{n+l_{ik}}^{n+l_{ik}} \sum_{(n_{is}=n+l_{ik}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{ik_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{s=1}^n (j_s = j_{ik} + l_s - j_{sa}^{ik})$$

$$\sum_{k=j_{sa} + j_{sa}^{ik}}^n (j_{sa} = l_i + j_{sa} - D - s) \sum_{j_i = j_{sa} + s - j_{sa}}$$

$$\sum_{n+k}^n (n_{is} = n + j_s + 1) \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{n_{sa} = n_{ik} + j_{ik} - j_{sa} - k_2}^n \sum_{n_s = n_{sa} + j_{sa} - j_i - k_3}$$

$$\frac{(n_i + j_{sa} + j_{sa}^{ik} - j_{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D + s - n < l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\binom{()}{j_s - j_{ik} + l_s - l_{ik}}} \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa} (l_i+n+j_{sa}^{D-s-1})} \sum_{j_i=l_i}^{n} \sum_{n_i=n}^{n} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$



$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \\
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{j_{sa} + j_{sa}^{ik} - j_{sa}} \sum_{(j_{sa} = l_i + n + j_{sa} - D - s)}^{(l_s + j_{sa} - 1)} \sum_{j_{sa}^{sa} + s - j_{sa}}^n \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + \dots + 1}^{n_{is} + j_s - \dots - k_1} \\
 & \frac{(n_{ik} + j_{ik} - j_{sa} - \dots - n_{sa} + j_{sa} - j_i - \dots)}{(n_{sa} + k_3 - \dots - j_i + 1)} \cdot \frac{(n_{is} - \dots - 1)!}{(j_{ik} - \dots - 1)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - \dots - k_1 - 1)!}{(j_{ik} - \dots - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=l_s+j_{sa})}^{(l_{sa})} \sum_{j_i=j^{sa}+s-j}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}=n+l_{k_3}-j_{ik}+1)}^{(n_{sa}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{(n_{sa}+j_{ik}-j^{sa})} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}
 \end{aligned}$$

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$$\sum_{j_{ik}=j^{sa}+j_{sa}^{lk}-j_{sa}} \sum_{(l_s+j_{sa}-1)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-lk_2)}^{( )} \sum_{(n_s=n_{sa}+j_s-j_i-lk_3)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - lk_1 - lk_2 - j_s)!}{(n_i - n - lk_1 - lk_2 - lk_3)! \cdot (n + j_{ik} - j_{sa} - j^{sa} - j_s - lk_1 - lk_2 - lk_3)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - j_s - 1)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik} - j_{sa}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge j^{sa} - j_{sa} - j_s \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_s > l_{ik} \wedge l_{sa} + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq l_i + l_s + s - n - 1$$

$$D - n < n \wedge n - lk > 0$$

$$j_{sa} - j_{sa}^i - 1 \wedge j_{sa}^{lk} - j_{sa} - 1 < j_{sa}^{ik} - 1 \wedge$$

$$\{j_{sa}^s, lk_1, j_{sa}^{lk}, lk_2, j_{sa}^{lk_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s - lk_1$$

$$lk_2 = s - lk_1 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_s)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa})} \sum_{j_i=l_i+n-D}^n$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \\
 & \sum_{(n_{sa} = n + k_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa})! \cdot j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1} \sum_{(j_s = j_{ik} + l_s - l_s)}^{( )}$$

$$\sum_{j_{ik} = l_i + n + j_{sa}^{lk} - D - s}^{l_{ik}} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{lk})}^{(l_{sa})} \sum_{j_i = j^{sa} + s - j_{sa}}^n$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 + k_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1}$$

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$$\begin{aligned}
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_{is} + j_i - l_{k_3} - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{lk} - l_{ik} - j_{sa})!}{(l_{sa} + l_{sa} - j_{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{( )} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}^{( )}
 \end{aligned}$$

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$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \dots \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\ )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_i + n + j_{sa}^{ik} - D - s - 1} \sum_{(j^{sa} = l_{sa} + n - D)}^{(l_{sa})} \sum_{j_i = l_i + n - D}^n$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - 1)! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_i - l_{sa} - 1)!}{(j^{sa} + l_i - l_{sa} - 1)! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D + l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )}$$

$$\sum_{j_{ik} = l_i + n + j_{sa}^{lk} - D - s}^{l_s + l_i - 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{lk})}^{(l_{sa})} \sum_{j_i = j^{sa} + s - j_{sa}}^n$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

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$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa} - j_{sa})!} \cdot \frac{(l_i + j_{sa} - l_{sa})!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{j_{sa}^{ik}-1} \sum_{j_{ik}=n+j_{sa}-j_{sa}^{ik}}^{n} \sum_{j_i=j^{sa}+s-j_{sa}}^{(n_i-j_s+1)} \sum_{n_{is}=n+l_k-j_s+1}^{n} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{(n_i-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}^{( )} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$



$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S j_s, j_{ik}, j_{sa}^{ik} = \sum_{k=1}^{(D-s)} \sum_{(j_s=2)}^{(n)} \sum_{j_{ik}=l_{ik}-l_s}^{(n)} \sum_{(j_{sa}=n-D)}^{(n)} \sum_{j_i=l_i+n-D}^{(n)} \frac{(n_i - n_{is} + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

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$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{i=l_i+n-s+1}^{(l_{sa} + j_{sa}^{ik+1})}$$

$$\sum_{j_{ik}=j_s+l_{ik}} \sum_{j_{sa}=j_{ik}+j_{sa}-j_s} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k} \sum_{(n_{i_s}+l_k-j_s+l_{k_1})} \sum_{(n_{i_k}+l_k-j_{i_k}-l_{k_1})}$$

$$\sum_{(n_{ik}-j^{sa}-l_{k_2})} \sum_{(n_{sa}+j^{sa}-j_i-l_{k_3})} \sum_{(n_{sa}=l_{k_3}-j^{sa}+1)} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!}$$

$$\frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_s - 1)! \cdot (n_{i_s} + j_s - n_{i_k} - j_{i_k} - l_{k_1})!}$$

$$\frac{(n_{i_k} - n_{sa} - 1)!}{(j^{sa} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{(l_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_i + n - D - s + 1)}^{(l_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = j_s + l_{ik} - l_s}^{( )} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{( )} \sum_{(j^{sa} + s - j_{sa})}^{( )}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n_{is} + j_s - \mathbb{k}_1)}^{( )}$$

$$\sum_{(n_{is} = n_{ik} + j_s - \mathbb{k}_2)}^{( )} \sum_{(n_{ik} = n_{is} + j_s - \mathbb{k}_3)}^{( )}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n - j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > l_s \wedge l_s \leq D - n - 1 \wedge$$

$$1 < j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} - 1 = l_s \wedge l_{sa}^{ik} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < D + j_s + s - n - 1 \wedge$$

$$D - n > 0 \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned}
 f_{z^S} S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{(l_i+n-D-s)} \\
 &\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_{sa})} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa})} \sum_{j_i=l_i+n-D}^n \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 &\sum_{(n_{sa}=n+k_3-k_1+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{n_{sa}+j_s-j_i-k_3} \\
 &\frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \\
 &\frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \\
 &\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \\
 &\frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 &\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 &\frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 &\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 &\frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 &\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 &\sum_{k=1}^{(l_s)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s)}
 \end{aligned}$$

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$$\sum_{j_{ik}=j_s+l_{ik}-l_s} (j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}) \sum_{j_i=j^{sa}+s-j_{sa}}^{(l_{sa})} \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{n_{sa}=n+l_{k_3}-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_2}} \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_{is}-n_{ik}-j_{ik}-l_{k_1})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \sum_{k=1}^s \sum_{j_s=l_i+n-D-s+1}^{(l_s)} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}}^{( )} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{( )}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-\mathbb{k}_1}$$

$$\sum_{(n_{s_a}=n_{i_k}+j_{i_k}-j^{s_a}-\mathbb{k}_2)}^{(\ )} \sum_{n_s=n_{s_a}+j^{s_a}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i + j_{i_k} + j_{s_a} - j^{s_a} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{s_a}^{i_k})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{i_k} + j_{s_a} - j^{s_a} - s - j_{s_a}^{i_k})!}$$

$$\frac{(l_s - 1)!}{(l_s - 1)! \cdot (s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{i_k} - j_{s_a}^{i_k} + 1 \wedge j_s + j_{s_a}^{i_k} - 1 \leq j_{i_k} \leq j^{s_a} - j_{s_a}^{i_k} - j_{s_a}$

$j_{i_k} + j_{s_a} - j_{s_a}^{i_k} \leq j^{s_a} \leq j_i + j_{s_a} - s \wedge j_i + s - j_{s_a} \leq j_i - n \wedge$

$l_{i_k} - j_{s_a}^{i_k} + 1 > l_s \wedge l_{s_a} + j_{s_a}^{i_k} - j_i = l_{i_k} \wedge l_{s_a} + j_{s_a} - s = \mathbb{k}_1 \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{s_a} = j_{s_a}^i - 1 \wedge j_{s_a}^{i_k} = j_{s_a} - 1, j_{s_a}^s < j_{s_a}^{i_k} - 1$

$s: \{j_{s_a}^s, \dots, \mathbb{k}_1, j_{s_a}^{i_k}, j_{s_a}, \mathbb{k}_3, j_{s_a}^i\} \wedge$

$s \cdot 5 \wedge s = \mathbb{k}_1 + \mathbb{k}_2 \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3$

$$fz^S_{j_s, j_{i_k}, j^{s_a}, j_i} = \sum_{k=1}^{(j_{i_k}-j_{s_a}^{i_k}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{i_k}=j^{s_a}+l_{i_k}-l_{s_a}}^{(\ )} \sum_{(j^{s_a}=j_i+l_{s_a}-l_i)}^{(\ )} \sum_{j_i=s+1}^{l_s+s-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+\mathbb{k}_2+\mathbb{k}_3-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=\mathbf{n}+k_3-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(j_i + j_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{( )} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_s+s}^{l_i} \\
 & \sum_{n_i=\mathbf{n}+k}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=\mathbf{n}+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=\mathbf{n}-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{(\cdot)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\cdot)} \\
& \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}}^{(\cdot)} \sum_{(j^{sa} = j_i + l_{sa} - l_i)}^{(\cdot)} \sum_{j_i = s+1}^{l_s + s - 1} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
& \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\cdot)} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \\
& \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
& \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$



$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\begin{aligned} & \sum_{j_{ik}=j^{sa}+l_{ik}-1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{j_{sa}=j_{sa}^{ik}-1}^{(j_{sa}-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(j_i-j_s)} \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-k_1)} \\ & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{(n_{sa}+j^{sa}-j_i-k_3)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \end{aligned}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(l_s)} \frac{\Delta}{(j_s - 2)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa})} \sum_{(j_{sa}=l_s+j_{sa}-j_{ik}-l_{sa})}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}=n+l_k-j_{ik}-1}^{n_{is}+j_s-j_{ik}-1}$$

$$\sum_{(n_{ik}=n+l_k-j_{ik}+1)}^{(n_{ik}+j_s-j_{sa}-l_{k_2})} \sum_{j_i-l_{k_3}}^{j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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$$\sum_{k=1}^{\binom{D}{j_s}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(l_s+j_{sa}-1)} \sum_{j_{ik}=j_{sa}^a+l_{ik}-l_{sa}}^{(n_i-j_s+1)} \sum_{(j_{sa}=j_{sa}+1)} \sum_{j_i=j_{sa}^a+l_i-j_{sa}^a} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^a)} \sum_{n_s=n_{sa}+j_{sa}^a-j_{sa}^a} \frac{(n_i+j_{ik}+j_{sa}-j_{sa}^a-l_{k_2}-l_{k_3}-j_{sa}^{ik})!}{(n_i-n-l_{k_1}-l_{k_2}-l_{k_3})! \cdot (n_{ik}+j_{sa}^a-j_{sa}^a-j_{sa}^{ik})!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D-j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i = 2 + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa}^a \leq j_{sa}^a \leq j_i + j_{sa} - s \wedge j_{sa}^a - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > 0 \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^a \wedge l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq 5 < n \wedge I = l_{k_1} = 0 \wedge$$

$$j_{sa}^a = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa}^a - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \dots, l_{k_1}, j_{sa}^s, \dots, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$z = 2 \wedge k = l_{k_1} + l_{k_2} + l_{k_3} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}^a, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{(l_s+j_{sa}-1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_1}} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-l_{k_1})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=2)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n+k_3-j^{sa}+1)}} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1 - 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{ik} + j^{sa} - n_s - k_2 - 1)!}$$

$$\frac{(n_s - 1)!}{(n - j_i - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(j_s - 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\sum_{k=1}^{l_s} \sum_{(j_s, j_{ik}, j^{sa}, j_i)} = \sum_{k=1}^{l_s} \sum_{(j_s, j_{ik}, j^{sa}, j_i)}$$

$$\sum_{k=j_s+j_{sa}^{ik}-1}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_s=1}^{(l_s)} \sum_{j_s=2}^{(l_s)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(j_s)} \sum_{j_{ik}=j_s+l_{sa}-l_{ik}}^{(j_s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n+l_k}^{(n_i-1)} \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n_i-1)} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$n > n - 1 \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{l=1}^{\mathbb{k}-j_{sa}^{ik}+1} \sum_{l=2}^{\mathbb{k}-j_{sa}^{ik}+1} \binom{()}{1} \sum_{j_{ik}=j_{sa}^{ik}}^{\binom{()}{1}} \sum_{(j_{sa}=j_i+l, l_i)} \sum_{j_i=l_i+n-D}^{\binom{()}{1}} \sum_{n_i=n+\mathbb{k}}^{\binom{()}{1}} \sum_{(n_i=n+\mathbb{k}-j_s+l)}^{\binom{()}{1}} \sum_{l_i=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{\binom{()}{1}} \sum_{(n_{ik}=n-j_{sa}-\mathbb{k}_2)}^{\binom{()}{1}} \sum_{n_{sa}=j_{sa}-j_i-\mathbb{k}_3}^{\binom{()}{1}} \sum_{(n_{sa}=n-\mathbb{k}_3-j_{sa}+1)}^{\binom{()}{1}} \sum_{n_s=n-j_i+1}^{\binom{()}{1}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$



$$\begin{aligned}
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(j_{ik}=j^{sa}+l_{ik}-l_{sa})} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_s+s}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}+j_{ik}-j_i-l_{k_3})}^{(n_{sa}+j_{ik}-j_i-l_{k_3})} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_i+1)}^{(n_{sa}=n+l_{k_3}-j_i+1)} \sum_{n_s=n-j_i}^{(n_s=n-j_i)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=1}^{(j_s)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(j_s=j_{ik}-j_{sa}^{ik}+1)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(j_{ik}=j^{sa}+l_{ik}-l_{sa})} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(j^{sa}=j_i+l_{sa}-l_i)} \sum_{j_i=l_i+n-D}^{l_s+s-1}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\ )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (l_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i - n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s = l_i \wedge$

$D + s - n < l_i \leq D + l_s - n - 1 \wedge$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$

$s \in \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k}$

$\mathbb{k}_z : z = 1 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=\mathbf{n}+k_3-j^{sa}+1)}}} \sum_{\substack{n_{sa}+j^{sa}-j_i-k_3 \\ n_s=\mathbf{n}-j_i+1}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(j_s + j_i - 1)! \cdot (\mathbf{n} - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(j_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_s+j_{sa})}^{(\mathbf{n}+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=\mathbf{n}+k}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=\mathbf{n}+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=\mathbf{n}-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}-l_{sa}}^{(l_s+j_{sa}-1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\cdot)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S j_s, j_{sa}^{sa}, j_i = \sum_{k=1}^{j_{ik} - j_{sa}^{ik} + 1} \sum_{(j_s=2)}^{l_s + j_{sa}^{ik} - 1} \sum_{(j_s+1)}^{n} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{n_{sa} + j^{sa} - j_i - \mathbb{k}_3} \sum_{(n_s=n-j_i+1)}^{(n_i - n_{is} - 1)!} \cdot \frac{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\begin{aligned}
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=0}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
 & \sum_{j_{ik}=l_s+s}^{n+j_{sa}^{ik}-s} \sum_{j_{sa}=j_{ik}+l_{sa}}^{(n_{sa}+1)} \sum_{j_i=j_{sa}+l_i-l_{sa}}^{(n_{ik}+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}+1)}^{(n_{ik}+1)} \sum_{k=n+l_k+l_{k_2}-j_{ik}+1}^{(n_{ik}+1)+l_{k_1}-l_{k_1}} \\
 & \sum_{(n_{sa}=1)}^{(n_{ik}+1)-j_{sa}-l_{k_2}} \sum_{n_{sa}+j_{sa}-j_i-l_{k_3}}^{(n_{sa}+1)+l_{k_3}-j_{sa}+1} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\sum_{k=1}^{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-1} \sum_{j^{sa}=j_{ik}+l_{sa}-l_{ik}}^{\binom{()}{j_i=j^{sa}+l_i}} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}-k_1}^{n_{ik}=n_{is}+j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{\binom{()}{j_i=j^{sa}+l_i}} \sum_{n_{sa}=n_{sa}+j^{sa}-j_i}^{n_{sa}=n_{sa}+j^{sa}-j_i}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{sa} - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq n - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n - a + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} + j_i + j_{sa} - s \wedge j^{sa} + j_i - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > 0 \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_i \leq D - l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq n - n + 1 \wedge$$

$$j_{sa} = j_i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$5 \wedge j_{sa} = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{\binom{()}{j_s=2}} \sum_{(j_s=2)}^{(l_i+n-D-s)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{n+j_{sa}^{ik}-s} \binom{(\quad)}{\quad} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_1}} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-l_{k_1})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s)}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{n+j_{sa}^{ik}-s} \binom{(\quad)}{\quad} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$



$$\sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2) \\ (n_{sa}=\mathbf{n}+\mathbb{k}_3-j^{sa}+1)}} \sum_{n_s=\mathbf{n}-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1 - 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{ik} + j^{sa} - n_s - j_i - 1)!}$$

$$\frac{(n_s - 1)!}{(n_{ik} + j_{ik} - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(j_s - 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!}$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_s)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}_1}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}_1-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (\mathbf{n} + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{( )} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_{sa}+n+s-D-j_{sa}}^{l_s+s-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(l_s - 1)!}{(D + j_i - n - l_i)! \cdot (j_i - 1)!} +$$

$$\sum_{j=1}^{(l_s)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j^{sa}+l_i}^{(j_{ik})} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(j^{sa})} \sum_{j_i=l_s+s}^n$$

$$\sum_{n+l_k}^{(n_i-j_s)} (n_{is}=n+l_k-j_s+1) \sum_{n_{ik}=n+l_k+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = j_{sa} + l_{ik} - l_{sa}}^{( )} \sum_{(j_{sa} = j_i + l_s - l_i)}^{( )} \sum_{j_i = l_s - 1}^{l_s - 1} \sum_{(j_s = j_{sa} - j_{sa})}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_i = n + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} = n + j_s - j_{ik} - \mathbb{k}_1)}$$

$$\sum_{(n_{sa} = n_{ik} + j_{sa} - \mathbb{k}_2)}^{( )} \sum_{(n_{sa} = n_{sa} + j_{sa} - j_i - \mathbb{k}_3)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \leq 1 \wedge l_s \leq n - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_{sa} + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - 1 \wedge l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$l_s \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-1)} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}^{(l_s+j_{sa}-1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}-\mathbb{k}_1}^{(n_i-j_s+1)}$$

$$\sum_{(n_{ik}+j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(j^{sa}+1)}^{(n_{sa}+j^{sa}-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 + 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_s+j_{sa})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-j^{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (j_s+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot
 \end{aligned}$$

$$\sum_{k=1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, \dots\} \wedge$$

$$s \geq 5 \wedge s = s + 1 \wedge$$

$$\mathbb{k} : z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n_s - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - 2)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - l_s) \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_{ik}=l_{sa}}^{l_s + j_{sa}^{ik} - 1} \sum_{j_{sa}^{ik}=D - j_{sa}}^{j_s - j_{ik} + l_{sa} - l_{ik}} \sum_{j_i=j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i=n+k}^{(n_i-1)} \sum_{n_{is}=n+k-j_s+1} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i + k + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

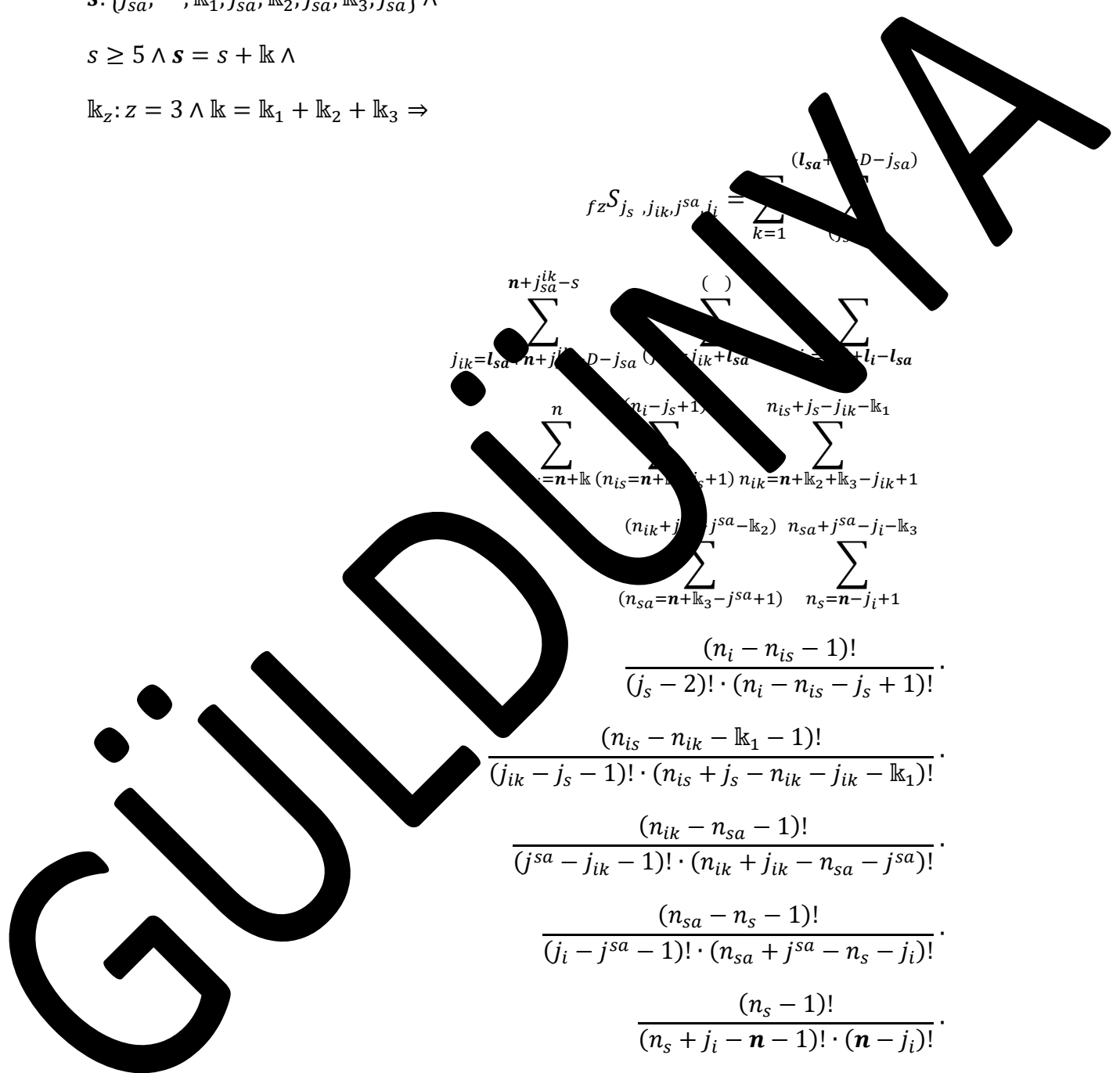
$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(l_{sa} + j_{sa} - D - j_{sa})} \sum_{j_{ik}=l_{sa} + n + j_{sa}^{ik} - s}^{n + j_{sa}^{ik} - s} \sum_{j_{is}=n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{j_{is}=n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{n_{ik}=n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa}=n + \mathbb{k}_3 - j_{sa} + 1)}^{(n_{ik} + j_{sa} - j_{sa} - \mathbb{k}_2)} \sum_{n_s=n - j_i + 1}^{n_{sa} + j_{sa} - j_i - \mathbb{k}_3} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$



$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_{i_{sa}}^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+l_{sa}-k_1}^{n_{is}+j_s-k_1} \\
 & \frac{(n_{ik}+j_{ik}-j^{sa}-n_{sa}+j^{sa}-j_i-1)!}{(n_{sa}+k_3-j_s-1)! \cdot (n_{is}-1)!} \cdot \frac{(j_i-2)! \cdot (n_{is}-j_s+1)!}{(n_{is}-k_1-1)!} \\
 & \frac{(j_{ik}-j_s-1)! \cdot (n_{ik}+j_s-n_{ik}-j_{ik}-k_1)!}{(n_{ik}-n_{sa}-1)!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} - \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s)}
 \end{aligned}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}} \sum_{\binom{()}{n_{is}=n+\mathbb{k}-j_s+1}} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}$$

$$\sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}} \sum_{n_s=n_{sa}+j_i-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - j_i - j_{sa})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - j_s - n - l_i)! \cdot (n - j_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik} - j_{sa}^{ik} \leq j_{ik} \leq j_s + j_{sa}^{ik} - j_i \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - j_{sa} - j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$D + j_{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - j_i - 1$

$D > n < n \wedge \mathbb{k} > 0$

$j_{sa}^{i-1} - 1 \wedge j_{sa}^{ik} - j_{sa}^{i-1} < j_{sa}^{ik} - 1 \wedge$

$\{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^{i-1}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s - 1 + 1$

$\mathbb{k}_2 = s - \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{\binom{()}{j_s=2}}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\binom{()}{j^{sa}=j_i+l_{sa}-l_i}} \sum_{l_s+s-1}^{l_s+s-1}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\ \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\ \frac{(n_{i_s} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{ik} - l_{k_1})!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(j^{sa} - j_s - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot \\ \frac{(n_s - 1)!}{(n + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\ \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\ \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\ \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\ \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{(\ ) \\ (j^{sa}=j_i+l_{sa}-l_i)}} \sum_{j_i=l_s+s}^n \\ \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s + j_i - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - l_s - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{\binom{(\quad)}{j_s = j_{ik} - j_{sa}^{ik} + 1}} \sum_{\substack{j_{ik} = j^{sa} + l_{ik} - l_{sa} \\ (j^{sa} = j_i + l_{sa} - l_i) \\ j_i = l_{ik} + s + n - D - j_{sa}^{ik}}}^{\binom{(\quad)}{l_s + s - 1}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{\binom{(\quad)}{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3}} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

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$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_{j_{ik}, j_{sa}^{ik}, j_{sa}^i} = \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{(j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{(l_s+1)}^{(l_s+1)-1} \sum_{(j_{ik}=j_{sa}^{ik}-l_{sa})}^{(j_{sa}^{ik}-l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{(j_i=j_{sa}^{ik}+l_i-l_{sa})}$$

$$\sum_{(i=n+\mathbb{k})}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j_{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

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$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(l_s)} \sum_{j_s=0}^{(l_s - k)} \sum_{j_{ik}=0}^{(n + j_{sa} - s)} \sum_{j_{sa}=l_s + j_{sa}}^{(n + j_{sa} - s)} \sum_{j_i=0}^{(l_i - l_{sa})} \\
 & \sum_{j_{ik}=0}^{(n - j_s + 1)} \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \\
 & \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \\
 & \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \sum_{j_{sa}=0}^{(n_{is} + j_s - j_{ik} - k_1)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=1}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{( )} \sum_{j_{ik} = j_{sa}^{sa} + l_{ik} - l_{sa}}^{(l_s + j_{sa} - 1)} \sum_{(j_{sa} = l_{ik} + n + j_{sa} - D - j_{sa}^{ik})}^{( )} j_{i_{sa} + l_i - l_{sa}} \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - k_1}^{( )} \sum_{(n_{is} = n_{ik} + j_s - k_2)}^{( )} \sum_{(n_{is} = n_{ik} + j_s - k_3)}^{( )} \frac{(n_i + j_{ik} + j_{sa} - j_{sa}^{sa} - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n_i + j_{ik} + j_{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n - 1 \wedge$$

$$1 < j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa} - 1 > l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n - l_i \leq D - l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D - n = 1 \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j^{sa}+1)} \sum_{(j_s=2)}^{(j_{ik}-j^{sa}+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j^{ik}_{sa}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+l_i-}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}=n+l_{k_3}-j_{ik}+1)}^{(n_{sa}=n+l_{k_3}-j_{ik}+1)} \sum_{n_s=n-j_i+}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_i - n_{ik} - j_s + 1)!}$$

$$\frac{(n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(n_{sa} - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j^{ik}_{sa} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j^{ik}_{sa} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)}$$

$$\sum_{j_{ik}=l_s+j^{ik}_{sa}-s}^{n+j^{ik}_{sa}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

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$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\ \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\ \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\ \frac{(n_{i_s} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{ik} - l_{k_1})!} \cdot \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ \frac{(n_{sa} - 1)!}{(j_s - j^{sa} - 1)! \cdot (n_{sa} + j_s - j_i)!} \cdot \\ \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\ \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\ \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=1}^{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-1} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \dots \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_{ik} + n - D - j_{sa}^{ik})} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (l_s - j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_{ik})!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s)} \\
 & \sum_{j_i=j_s+j_{sa}^{ik}-1}^{n+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{(l_s)} \sum_{l_{ik} = l_{ik} + n - D - j_{sa}^{ik}}$$

$$\sum_{j_{ik} = j_s - k - 1}^{(j_{sa}^{ik} + l_{sa} - l_{ik})} \sum_{j_i = j_s - l_i - l_{sa}}$$

$$\sum_{n+k}^n \sum_{n_{is} = n + j_s + 1}^{(j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}$$

$$\sum_{n_{sa} = n_{ik} + j_{ik} - j_{sa} - k_2} \sum_{n_s = n_{sa} + j_{sa} - j_i - k_3}$$

$$\frac{(n_i + j_{sa} + j_{sa} - j_{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{(j_i+j_{sa}-l_s+s-1)} \sum_{j_{ik}=j_{sa}^{ik}+l_{ik}-l_{sa}}^{(j_i+j_{sa}-l_s+s-1)} \sum_{i_s=s+1}^{n_{is}+j_s-j_{ik}} \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n-k_2+k_3-j_{ik}+1)}^{(n_{ik}-j_{sa}-k_2-j_i-k_3)} \sum_{(n_s=n-k_3-j_i+1)}^{(n_s=n-k_3-j_i+1)} \frac{(n_i-n_{is}-1)!}{(j_s-1)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_{ik}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j_{sa}-1)! \cdot (n_{sa}+j_{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j_{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j_{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

GÜLDÜZÜM YA

$$\begin{aligned}
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa})} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{sa})} \sum_{j_i=l_s+s}^{l_i} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{n_{sa}+j_{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}
 \end{aligned}$$

GÜLDEN



$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)} \sum_{j_i=s+1}^{l_s+s-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_{sa}=n_{sa}+j_i-k_3)}^{(n_{sa}=n_{sa}+j_i-k_3)} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_s)!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - j_s - k_1 - k_2 - k_3)!} \cdot \frac{(l_s - 2)!}{(l_s - 1)! \cdot (j_s - 2)!} \cdot \frac{(D - j_s - 1)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik} - 1 < j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge j^{sa} + j_{sa} - j_{sa}^{ik} \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = j_s > 0 \wedge$$

$$j_s = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{ \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_s \}$$

$$j_s \geq 5 \wedge j_s = s + k \wedge$$

$$k_z: z = 3 \wedge k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-1)} \sum_{(j^{sa}=j_{sa}+1)}^{l_i} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_s - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_s - j^{s_a} - 1)! \cdot (n_{s_a} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s - j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_i + j_{s_a} - l_{s_a} - s)!}{(j^{s_a} + l_i - j_i - l_{s_a})! \cdot (j_i + j_{s_a} - j^{s_a} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +
 \end{aligned}$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)}$$

$$\sum_{j_{i_k}=j^{s_a}+l_{i_k}-l_{s_a}} \sum_{(j^{s_a}=l_s+j_{s_a})}^{(l_{s_a})} \sum_{j_i=j^{s_a}+s-j_{s_a}}^{l_i}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

GÜLDÜZÜM

$$\begin{aligned}
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - l_{k_3})!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot (n - j_i)! \\
 & \frac{(l_s - 2)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-1)} \sum_{(j^{sa}=j_{sa}+1)}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{( )} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}^{( )}
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot$$

$$\frac{(l_s - 2)!}{(l_s - j_s) \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s - j^{sa} - 1)!}{(j_s + l_{ik} - j_{ik} - l_s) \cdot (j_{ik} - j_s - j^{sa} + 1)!} \cdot$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - l_{sa} - s) \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=2)}$$

$$\sum_{k=l_s+j^{sa}}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

GÜLDÜZÜM

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$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - l_{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}} \sum_{(j^{sa}+j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+l_k}^{(n_i-1)} \sum_{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

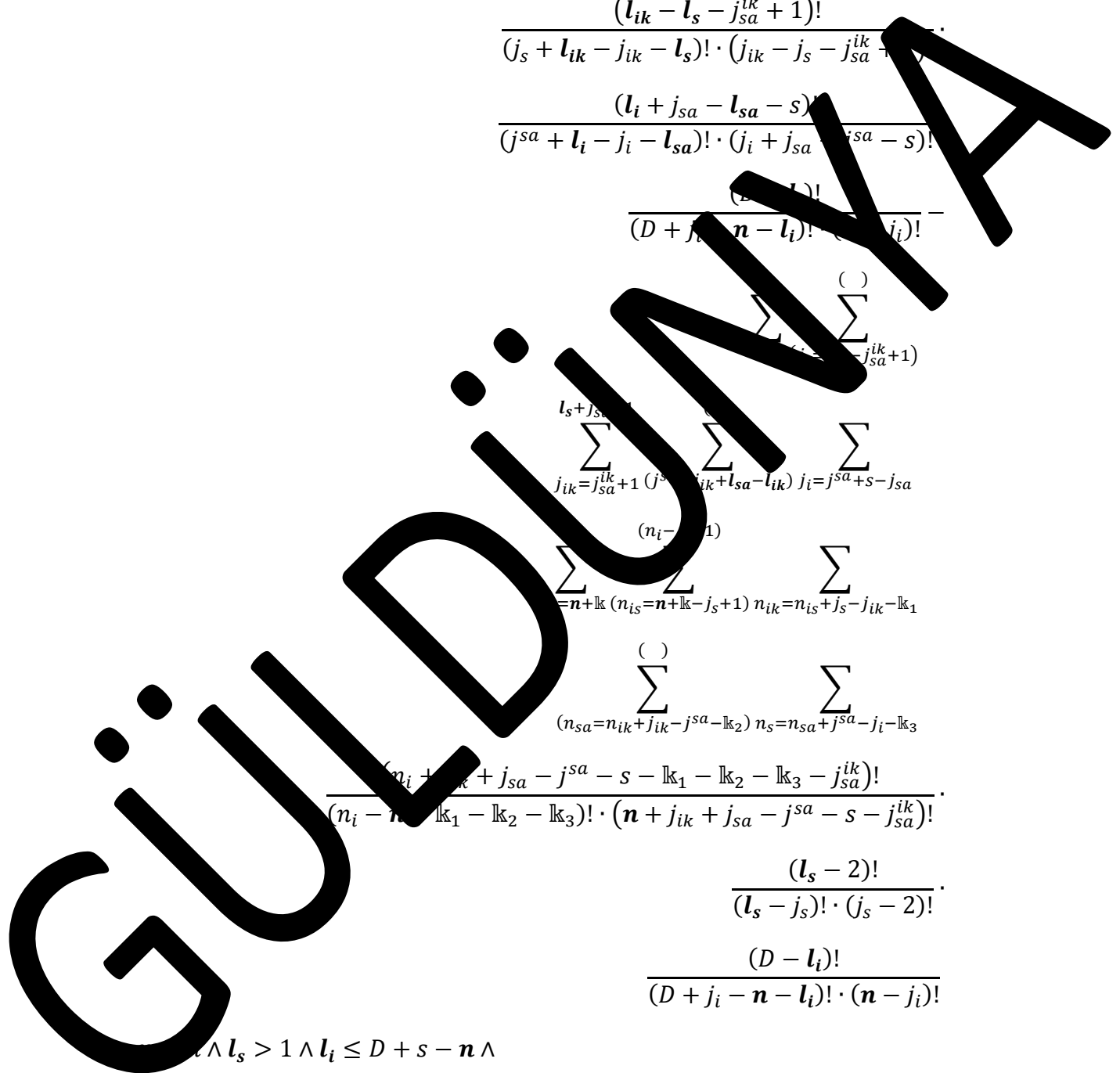
$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i + k_1 + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

- $l_s > 1 \wedge l_i \leq D + s - n \wedge$
- $1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$
- $j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$



$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=2}^{(l_s)} \sum_{j_{ik}=j_s+j_{sa}^{ik}}^{l_{ik}} \sum_{j_{sa}=j_{ik}+l_{sa}}^{(n_{ik}+1)} \sum_{j_i=j_{sa}+s-j_{sa}}^{(n_{sa}+1)} \sum_{n_i=n+\mathbb{k}}^{(n_{ik}+1)} \sum_{n_{sa}=n+\mathbb{k}-j_s}^{(n_{sa}+1)} \sum_{n_s=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{(n_{sa}+1)} \sum_{n_s=n-j_i+1}^{(n_{sa}+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{(j^{sa}+s-j_{sa})}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{sa}-l_{k_1})}^{( )}$$

$$\sum_{(n_{sa}=n_{ik}+j_{sa}-l_{k_2})}^{( )} \sum_{(n_{sa}-j_i-l_{k_3})}^{( )}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa}^{ik} - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n_i + j_{sa} - j_{sa}^{ik} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n - 1 \wedge$$

$$1 < j_s \leq j_{ik} + j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n - 1 \leq D + j_i + s - n - 1 \wedge$$

$$D > n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^i, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, l_{k_3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$



$$\begin{aligned}
 f_{z^S} S_{j_s, j_{ik}, j^{sa}, j_i} &= \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)} \\
 &\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(j_i+j_{sa}-s)} \sum_{(j^{sa}=l_{sa}+n-D)}^{(j_i+j_{sa}-s)} \sum_{j_i=l_i+n}^{l_s+s-1} \\
 &\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{n_{sa}=n+l_{k_3}}^{n_{ik}+j_{ik}-j^{sa}} \sum_{n_s=n-j_i}^{n_{sa}+j_{sa}-j_i-l_{k_3}} \\
 &\frac{(n_i-n_{sa}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!} \cdot \frac{(n_{ik}+n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j^{sa}-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 &\sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa})} \sum_{j_i=l_s+s}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i-1}^{n_{sa}+j^{sa}-j_i} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \\
 & \frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{is}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \sum_{k=1}^{\binom{()}{}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{\binom{()}{}} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+j_{sa}-s)}^{\binom{()}{}} \sum_{j_i=l_i+n-D}^{l_s+s-1}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\ )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 1)!}{(l_s - 1)! \cdot (s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - l_i - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j_i + s - j_{sa} \leq j_i - n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_i = l_{ik} \wedge l_{sa} + j_{sa} - s > l_i \wedge$$

$$D + s - n < l_i \leq D + l_s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$$

$$s \in \{j_{sa}^s, \dots, \mathbb{k}_1 - j_{sa}^{ik}, \mathbb{k}_2, j_{sa} - \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k}_z$$

$$\mathbb{k}_z: z = 1 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_i+n+j_{sa}-D-s-1)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{j_i=l_i+n-D}^n$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\begin{aligned}
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_s - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{is} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n - j_i - 1)!} \cdot (n - j_i)! \\
 & \frac{(l_s - 2)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{ik} - j_{sa}^{ik} + 1)!}{(j_s + j_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} - l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^n \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{n} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i - l_{sa} - l_s)!}{(j_i + l_i - j_i - l_s)! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa})} \sum_{(j^{sa}=l_s+j_{sa})}^{(l_{sa})} \sum_{j_i=j^{sa}+s-j_{sa}}^n \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot
 \end{aligned}$$

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$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot$$

$$\frac{(l_s - 2)!}{(l_s - j_s)!(j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s - j^{sa} - 1)!}{(j_s + l_{ik} - j_{ik} - l_s)!(j_{ik} - j_s - j^{sa} + 1)!} \cdot$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_{sa} - l_{sa} - s)!(j_i + j_{sa} - j^{sa} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}-l_{sa}}^{(l_s+j_{sa}-1)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)} \sum_{j_i=j^{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot$$

$$\frac{(l_s - 2)!}{(l_s - j_s)!(j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S j_s, j_{sa}^{ik}, j_i = \sum_{k=1}^{j_{ik} - j_{sa}^{ik} + 1} \sum_{(j_s=2)}^{n} \sum_{j_{ik} = l_i + n - D}^{l_i + n + j_{sa}^{ik} - D - s} \sum_{(j_s=1)}^{n} \sum_{(j_i = j_{ik} + l_{sa} - l_{ik})}^{n} \sum_{j_i = l_i + n - D}^{n} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{n} \sum_{(n_{ik} = n + \mathbb{k}_2 + \mathbb{k}_3 - j_{ik} + 1)}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n + \mathbb{k}_3 - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - \mathbb{k}_3)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\begin{aligned}
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - l_i)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{(j_s-1)} \sum_{(j_i=1)}^{(j_i-1)} \sum_{(j_{sa}=1)}^{(j_{sa}-1)} \sum_{(j_{ik}=1)}^{(j_{ik}-1)} \sum_{(j_{sa}^{ik}=1)}^{(j_{sa}^{ik}-1)} \\
 & \sum_{(n_{is}=n+l_{sa}-l_{ik})}^{(n_{is}=n+l_{sa}-l_{ik}-1)} \sum_{(n_{ik}=n+l_{sa}-l_{ik})}^{(n_{ik}=n+l_{sa}-l_{ik}-1)} \sum_{(n_{sa}=n+l_{sa}-j_i-l_{sa})}^{(n_{sa}=n+l_{sa}-j_i-l_{sa}-1)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{j_s=0}^{n-k} \sum_{j_{ik}=l_s+j_{sa}^{ik}}^{l_{ik}} \sum_{j^{sa}=j_{ik}+l_{sa}}^{( )} \sum_{j_i=j^{sa}-j_{sa}}^{n} \\
 & \sum_{n_i=n+k}^n \sum_{n_i-j_s+1}^{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}}^{n_{is}+j_s-j_{ik}} \\
 & \sum_{n_{ik}=n+k_3-j_{ik}+1}^{(n_{ik}-j^{sa}-k_2)} \sum_{j_i-k_3}^{(n_{ik}-j^{sa}-k_2)} \\
 & \sum_{n_s=n-j_i+1}^{(n_s+n+k_3-j_{ik}-1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -
 \end{aligned}$$

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$$\sum_{k=1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+s-}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_{ik}-k_1}^{( )}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{(n_{sa}+j^{sa}-j_i)}^{( )}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - k_1 - k_2 - k_3 + j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{sa} - j^{sa} - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq n - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} + j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + n < l_i \leq D - l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$5 \wedge \dots + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{( )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=l_i+n-D}^n \\
 & \sum_{n_i=n+l_k}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+l_k-j_s+1}} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}{n_{sa}=n+l_{k_3}-j^{sa}+1}} \sum_{\binom{n_{sa}+j^{sa}-j_i}{n_s=j_i-1}} \\
 & \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1) \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1) \cdot (n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_i+j_{sa}-l_{sa}-s)!}{(j^{sa}+l_i-j_i-l_{sa})! \cdot (j_i+j_{sa}-j^{sa}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{\binom{(l_s)}{j_s=l_i+n-D-s+1}} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}} \sum_{j_i=j^{sa}+s-j_{sa}}^n
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{\substack{n_{i_s}+j_s-j_{ik}-l_{k_1} \\ n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}} \\
 & \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-l_{k_2}) \\ (n_{sa}=n+l_{k_3}-j^{sa}+1)}} \sum_{\substack{n_{sa}+j^{sa}-j_i-l_{k_3} \\ n_s=n-j_i+1}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(j^{sa} - j_i - 1)! \cdot (n_{sa} + j_i - n_{sa} - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^l \sum_{(j_s=l_i+n-D-s+1)}^{(l_s)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+s-j_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{i_s}=n+l_k-j_s+1)}} \sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-l_{k_1}}
 \end{aligned}$$

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$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=s+1}^{l_s+s-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!}$$

$$\frac{(n_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa}^{ik} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + 1 - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=l_s+s}^{l_i}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_{ik}=j_s - j_{sa} - j_{sa}^{ik} + 1} \sum_{j_s=j_{ik} - j_{sa}^{ik} + 1} \sum_{j_{sa}=j_i + l_{sa} - l_i} \sum_{j_i=s+1}^{l_s+s-1}$$

$$\sum_{l_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

- $D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$
- $1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$
- $j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

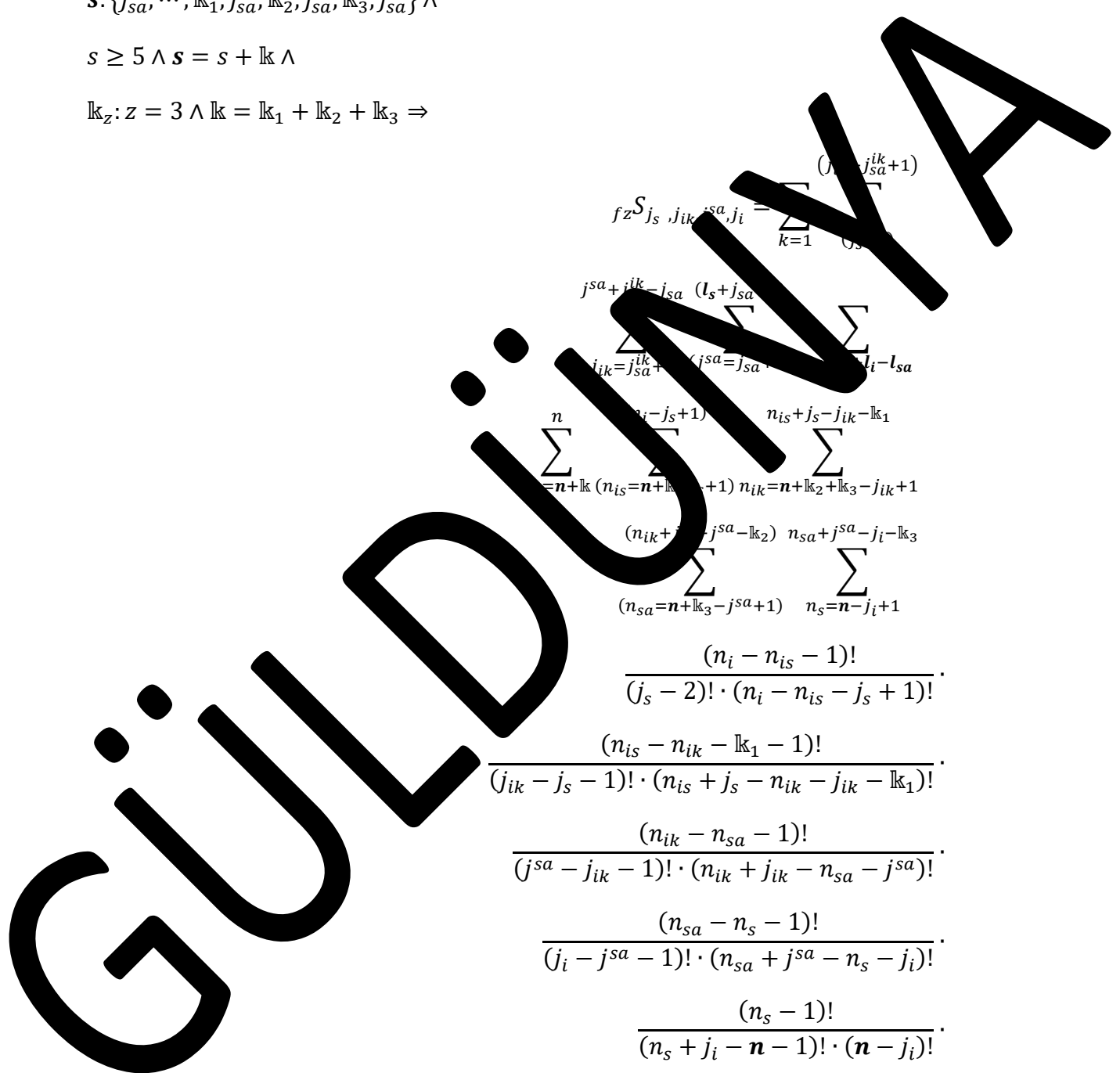
$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz \sum_{k=1}^s j_s, j_{ik}^{sa}, j_i = \sum_{k=1}^s \frac{(j_s - j_{sa}^{ik} + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$





$$\begin{aligned}
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \frac{\Delta}{(j_s - \Delta)!} \cdot \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}} \sum_{(j^{sa}=l_s+j_{sa}^{ik}-j_{ik}-l_{sa})}^{(l_{sa})} \frac{\Gamma}{(j_s - \Gamma)!} \cdot \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-j_{ik}-l_{ik})}^{(n_{is}+j_s-j_{ik}-l_{ik})} \frac{\Delta}{(j_s - \Delta)!} \cdot \\
 & \sum_{(n_{ik}+j_{sa}-l_{k_2})}^{(n_{ik}+j_{sa}-l_{k_2})} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)} \frac{\Gamma}{(j_s - \Gamma)!} \cdot \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - \Gamma)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - \Gamma)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - \Gamma)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -
 \end{aligned}$$

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$$\sum_{k=1}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-1)} \sum_{(j_{sa}=j_{sa}+1)} \sum_{j_i=j_{sa}+l_i-1}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-k_1}^{( )}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2-k_3)}^{( )} \sum_{(n_{sa}=n_{sa}+j_{sa}-j_i)}^{( )}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{sa} - j_{sa} - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s + j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_i \leq \dots + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq \dots + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_s \leq j_i + j_{sa} - s \wedge j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > \dots \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq \dots < n \wedge I = k_1 + k_2 + k_3 \wedge$

$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_s^s, k_1, j_{sa}^{ik}, j_{sa}^{ik}, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s \leq \dots + k \wedge$

$z = 2 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}^{ik}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{( )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-1} \sum_{(l_{sa})} \sum_{j_i=j_{sa}^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_i}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j_{sa}^{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}^{sa}-l_{k_2})} \sum_{(n_s-j_i+1)}^{(n_{sa}+j_{sa}^{sa}-j_i-l_{k_1})} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_{is}+j_i-n_{ik}-j_{ik}-l_{k_1})!} \\
 & \frac{(n_{ik}+n_{sa}-1)!}{(j_{sa}^{sa}-j_{ik}-1)!(n_{is}+j_{ik}-n_{sa}-j_{sa}^{sa})!} \\
 & \frac{(n_{sa}-n_s-1)!}{(n_i-j_{sa}-1)!(n_{sa}+j_{sa}^{sa}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)!(n-j_i)!} \\
 & \frac{(l_s-2)!}{(l_s-j_s)!(j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)!(j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}^{sa}-l_{ik})!(j_{sa}^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)!(n-j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)}
 \end{aligned}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}}^{l_{ik}} \sum_{(l_{sa})} \sum_{j_i=j_{sa}^{sa}+l_i-l_{sa}}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_k+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_s - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_s - j^{s_a} - 1)! \cdot (n_{s_a} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s + l_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

$$\sum_{k=1}^{( )} \sum_{(j_s=j_{i_k}-j_{s_a}^{i_k}+1)}^{( )}$$

$$\sum_{j_{i_k}=j_{s_a}^{i_k}+1}^{l_s+j_{s_a}^{i_k}-1} \sum_{(j^{s_a}=j_{i_k}+j_{s_a}-j_{s_a}^{i_k})}^{( )} \sum_{j_i=j^{s_a}+l_i-l_{s_a}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-l_{k_1}}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 1)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} + 1)!}$$

$$\frac{(n_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j_{sa}^{ik} - l_{ik})! \cdot (j_{ik} + j_{sa}^{ik} - j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{( )} \sum_{j_i=j_{sa}+l_i-l_{sa}}$$

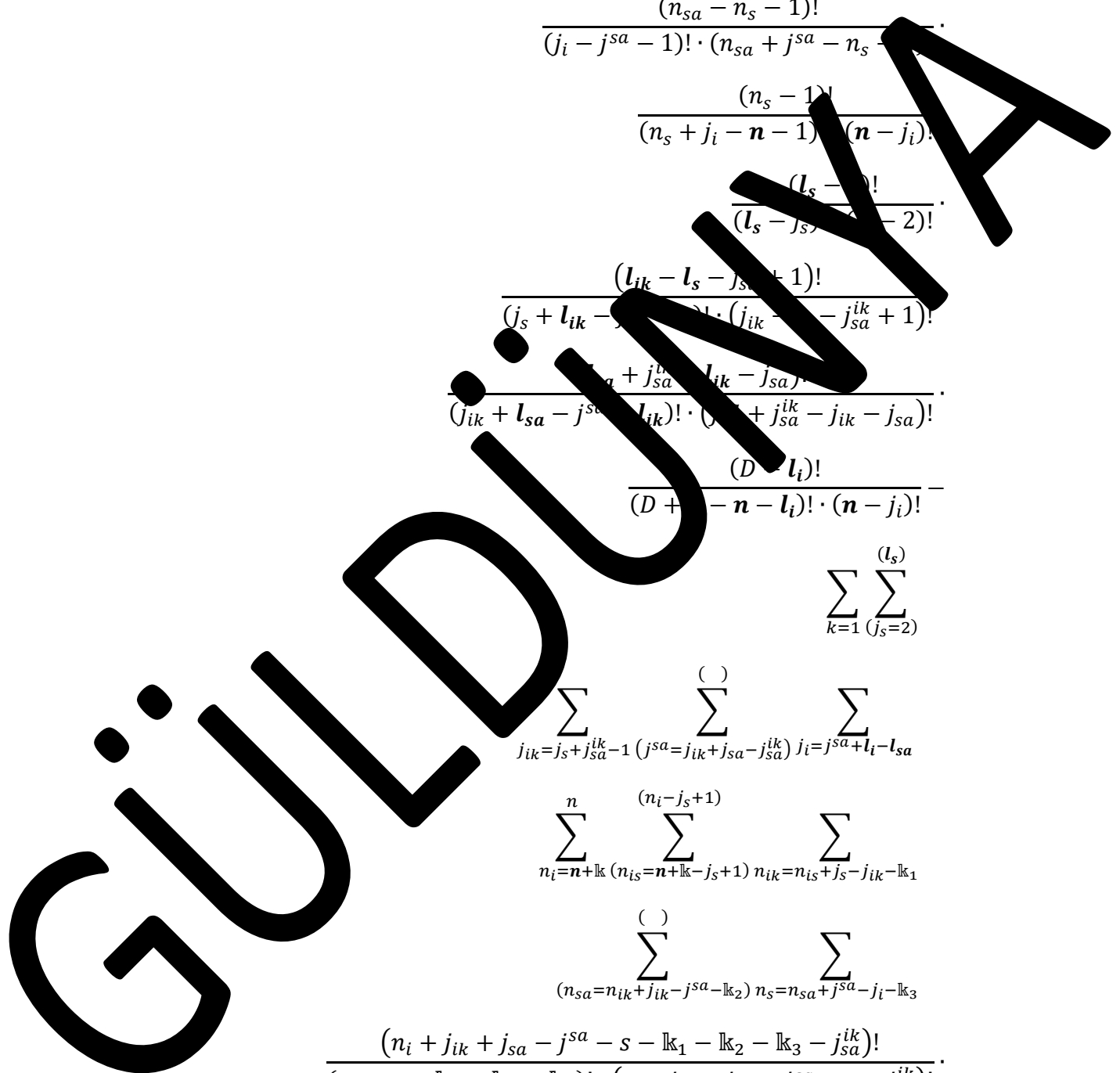
$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$\begin{aligned} f_{j_{sa}^s, j_{sa}^{ik}, j_{sa}^i} &= \sum_{k=1}^{(n_i - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{(j_s)} \\ &\sum_{j_{ik}=l_{ik}+n-D}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(j^{sa})} \sum_{j_i=l_i+n-D}^{l_s+s-1} \\ &\sum_{i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\ &\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\ &\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ &\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{sa})!}$$

$$\frac{(D + j_i - n - l_i)! \cdot (n - j_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{j_s=2}^{(l_s)} \sum_{j_{ik}=l_{ik}+1}^{l_{ik}} \sum_{j^{sa}=j_i+l_{sa}-l_i}^{( )} \sum_{j_i=l_s+s}^n$$

$$\sum_{n+l_k}^{(n_i-j_s)} \sum_{(n_{is}=n+l_k-j_s+1)}^{n_{is}+j_s-j_{ik}-l_{k1}} \sum_{n_{ik}=n+l_{k2}+l_{k3}-j_{ik}+1}$$

$$\sum_{(n_{sa}=n+l_{k3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{(j_s)} \sum_{j_{ik}=j^{sa}}^{(j_{ik})} \sum_{j_i=l_i+n-D}^{(j_i)} \sum_{j_{sa}=j_i+l_s-1}^{(j_{sa})}$$

$$\sum_{n_i=n+l_k}^{(n_i)} \sum_{n_s=n+l_k-j_s+l_{ik}}^{(n_s)} \sum_{j_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{(j_{ik})}$$

$$\sum_{n_s=n_{sa}+j_{sa}^{ik}-l_{k_2}}^{(n_s)} \sum_{n_s=n_{sa}+j_{sa}^{ik}-j_i-l_{k_3}}^{(n_s)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < l_s > 1 \wedge l_i \leq D - n + 1 \wedge$$

$$1 \leq j_{ik} - j_{sa}^{ik} - 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{sa}^{ik} - 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=l_i+n+j_{sa}-1)}^{(l_s+j_{sa}-1)} \sum_{(j_{sa}=l_i+n+j_{sa}-1)}^{(j_{sa}=l_i+n+j_{sa}-1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-j_{ik})}^{(n_{is}+j_s-j_{ik})}$$

$$\sum_{(n_{ik}-j_{sa}-k_2)}^{(n_{ik}-j_{sa}-k_2)} \sum_{(j_i-k_3)}^{(j_i-k_3)}$$

$$\sum_{(j_s=n+k_3-j_s-1)}^{(j_s=n+k_3-j_s-1)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\begin{aligned}
 & \sum_{k=1} \sum_{(j_s=2)}^{(l_s)} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}} \sum_{(j^{sa}=l_s+j_{sa})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j_{ik}+1)}^{n_{is}+j_s-j_{ik}-k_1} \\
 & \sum_{(n_{sa}=n+k_3-j_{ik}+1)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{n_s=n-j_i}^{n_{sa}+j_{ik}-j_i-k_3} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}
 \end{aligned}$$

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$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \sum_{(n_s=n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - j_s)!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - j_{sa} - j_{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - j_s - n - l_i)! \cdot (n - j_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik}^{ik} \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - j_s \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - j_{sa} - j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$D + s - n < l_i \leq l_i + l_s + s - n = D$

$D > n < n \wedge k = k > 0$

$j_{sa}^{i-1} \wedge j_{sa}^{ik} - j_{sa}^{i-1} < j_{sa}^{ik} - 1 \wedge$

$\{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}^{i-1}, k_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s - k_1$

$k_2 = s - k_1 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz_{j_s, j_{ik}, j^{sa}, j_i}^S = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

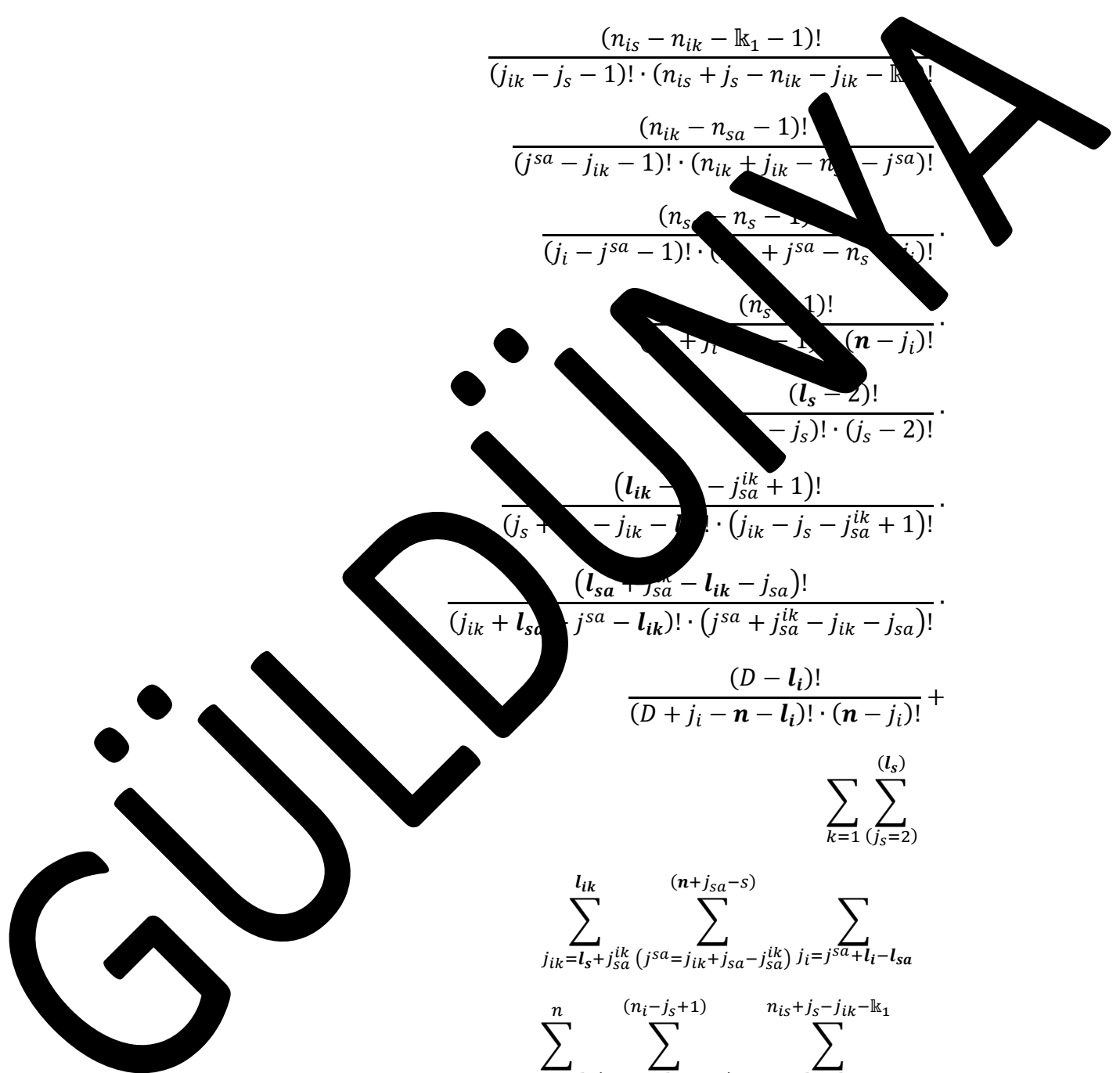
$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_s - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_s - j^{s_a} - 1)! \cdot (n_{s_a} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n + j_i - n_s - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s + l_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(j_{i_k}-j_{s_a}^{i_k}+1)} \sum_{(j_s=2)} \\
 & \sum_{j_{i_k}=l_i+n+j_{s_a}^{i_k}-D-s}^{l_s+j_{s_a}^{i_k}-1} \sum_{(j^{s_a}=j_{i_k}+j_{s_a}-j_{s_a}^{i_k})}^{(n+j_{s_a}-s)} \sum_{j_i=j^{s_a}+l_i-l_{s_a}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_{k_2}+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}}
 \end{aligned}$$

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$$\frac{\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_s-n_s-1)!}{(j_i-j^{sa}-1)! \cdot (n_{is}+j^{sa}-n_s-k_3)!} \cdot \frac{(n_s-1)!}{(j_s-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-2)!}{(j_s-1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-j_{ik}-j_{sa}^{ik}+1)!}{(j_s+j_{ik}-j_{ik}-l_{ik})! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$



$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - j_{sa} - 1)!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_{sa} + j_s - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{( )}$$

$$\sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_s + j_{sa}^{ik} - 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{( )} \sum_{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1}$$

$$\sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{( )} \sum_{n_s = n_{sa} + j^{sa} - j_i - \mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{(j_s-1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{\mathbb{k}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$



$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - l_{sa})!}$$

$$\frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{j_i} \sum_{l_i = l_i + n - D - s + 1}$$

$$\sum_{l_{ik} = j_s + j_{sa}}^{l_{ik}} \sum_{j_{sa} = j_{sa} - s}^{(j_{sa} - s)} \sum_{j_i = j_{ik} + j_{sa} - j_{sa}^{ik}}^{j_i = j^{sa} + l_i - l_{sa}}$$

$$\sum_{n+l_k}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + l_k - j_s + 1)} \sum_{n_{ik} = n + l_k + l_{k_3} - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - l_{k_1}}$$

$$\sum_{(n_{sa} = n + l_{k_3} - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - l_{k_2})} \sum_{n_s = n - j_i + 1}^{n_{sa} + j^{sa} - j_i - l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

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$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$(l_s)$$

$$(j_s = l_i + n - D - s)$$

$$j_{ik} = j_s + j_{sa}^{ik} - 1 \quad (j_{sa} = j_{sa}^{ik} - j_{sa} - j_{sa}^{ik}) \quad j_i = j_s + l_i - l_{sa}$$

$$\sum_{n_{is} = n + j_s + 1}^n \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}^{j_s + 1} \sum_{n_{sa} = n_{ik} + j_{ik} - j_{sa} - k_2}^{j_s + 1} \sum_{n_s = n_{sa} + j_{sa} - j_i - k_3}^{j_s + 1}$$

$$\frac{(n_i + j_{sa} + j_{sa}^{ik} - j_{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D - n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik})} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik})} \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_i+l_{sa})}^{(j^{sa}=j_i+l_{sa})} \sum_{j_i=l_{sa}+n+S-D}^{l_s+s} \sum_{n_i=n}^n \frac{(n_i+1) \dots (n_i+j_s-j_{ik}-\mathbb{k}_1)}{(n_{is}=n+\mathbb{k}_1+1) \dots (n_{ik}=n-j_{ik}+1)} \frac{(j_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2) \dots (n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}{(n_{sa}=n-\mathbb{k}_3-j^{sa}+1) \dots (n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)}^{(l_s)} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}} \sum_{(j^{sa}=j_i+l_{sa})}^{( )} \sum_{j_i=l_s+s}^{n} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{ik})}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+l_k-j_{ik})}^{n_{is}+j_s-l_{k_1}} \\
 & \sum_{(n_{sa}+j^{sa}-j_i)}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_{sa}+j^{sa}-j_i)}^{(n_{sa}+j^{sa}-j_i)} \\
 & \frac{(n_{is} - j_s - l_{k_1} - 1)!}{(n_{is} - j_s + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -
 \end{aligned}$$

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$$\sum_{k=1}^{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{lk}-j_{sa}}^{\binom{()}{j_{sa}=j_i+l_{sa}-l_i}} \sum_{j_i=l_{sa}+n+s-D-j_{ik}}^{l_s+s-1}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}-j_{ik}-lk_1}^{\lfloor \frac{n_{is}-j_{ik}-lk_1}{2} \rfloor}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-lk_2)}^{\binom{()}{n_{sa}=n_{sa}+j_{sa}-j_i}}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - lk_2 - lk_3 - j_{sa}^{ik})!}{(n_i - n - lk_1 - lk_2 - lk_3)! \cdot (n_i + j_{sa} - j_{sa} - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq n - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{lk} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > 0 \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq n + l_s + j_{sa} - n - 1 \wedge$$

$$n \geq n < n \wedge I = lk > 0$$

$$j_{sa} = j_i - 1 \wedge j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, lk_2, j_{sa}, lk_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s + lk \wedge$$

$$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{\binom{()}{j_{ik}-j_{sa}^{ik}+1}} \sum_{(j_s=2)}^{\binom{()}{j_s}}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_s+j_{sa}-1)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}-1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=j_i+1}^{n_{sa}+j^{sa}-j_i-1} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_{is}-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-n_s-1)!}{(j_i-j^{sa}-1)!(n_{sa}+j^{sa}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-2)!}{(l_s-j_s)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=2)} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}} \sum_{(j^{sa}=l_s+j_{sa})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n+l_k+l_{k_3}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \\
 & \sum_{(n_{s_a}=n+l_{k_3}-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{s_a}+j^{s_a}-j_i-l_{k_3}} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - l_{k_1} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{i_k} - l_{k_1})!} \cdot \\
 & \frac{(n_{i_k} - n_{i_s} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} - 1)!}{(j_s - j^{s_a} - 1)! \cdot (n_{s_a} + j_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_i + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - l_s - j_{s_a}^{i_k} + 1)!}{(j_s + j_{i_k} - j_{i_k} - l_s)! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} + l_{s_a} - j^{s_a} - l_{i_k})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=j_{i_k}-j_{s_a}^{i_k}+1)}^{( )} \\
 & \sum_{j_{i_k}=j^{s_a}+j_{s_a}^{i_k}-j_{s_a}}^{(l_s+j_{s_a}-1)} \sum_{(j^{s_a}=l_{s_a}+n-D)}^{(l_s+j_{s_a}-1)} \sum_{j_i=j^{s_a}+l_i-l_{s_a}}^{(l_s+j_{s_a}-1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{i_k}=n_{i_s}+j_s-j_{i_k}-l_{k_1}}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j^{ik})!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!} \cdot \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}}$$

$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_{ik} < n$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > j_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$

$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, \dots\} \wedge$

$s \geq 5 \wedge s = s + 1 \wedge$

$k : z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1}$$

$$\sum_{(n_{sa}=n+k_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-k_3}$$



$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{ik} - 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 2)!}{(l_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} - 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_{sa} + j_s - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa}^{ik})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)} \\
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n+\mathbb{k}_3-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
 \end{aligned}$$

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$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(l_s - j_s - 1)! \cdot (j_s - 1)!}$$

$$\frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!}$$

$$\frac{(n_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa}^{ik} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + 1 - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}}^{l_{ik}} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n+j_{sa}-s)} \sum_{j_i=j_{sa}+l_i-l_{sa}}$$

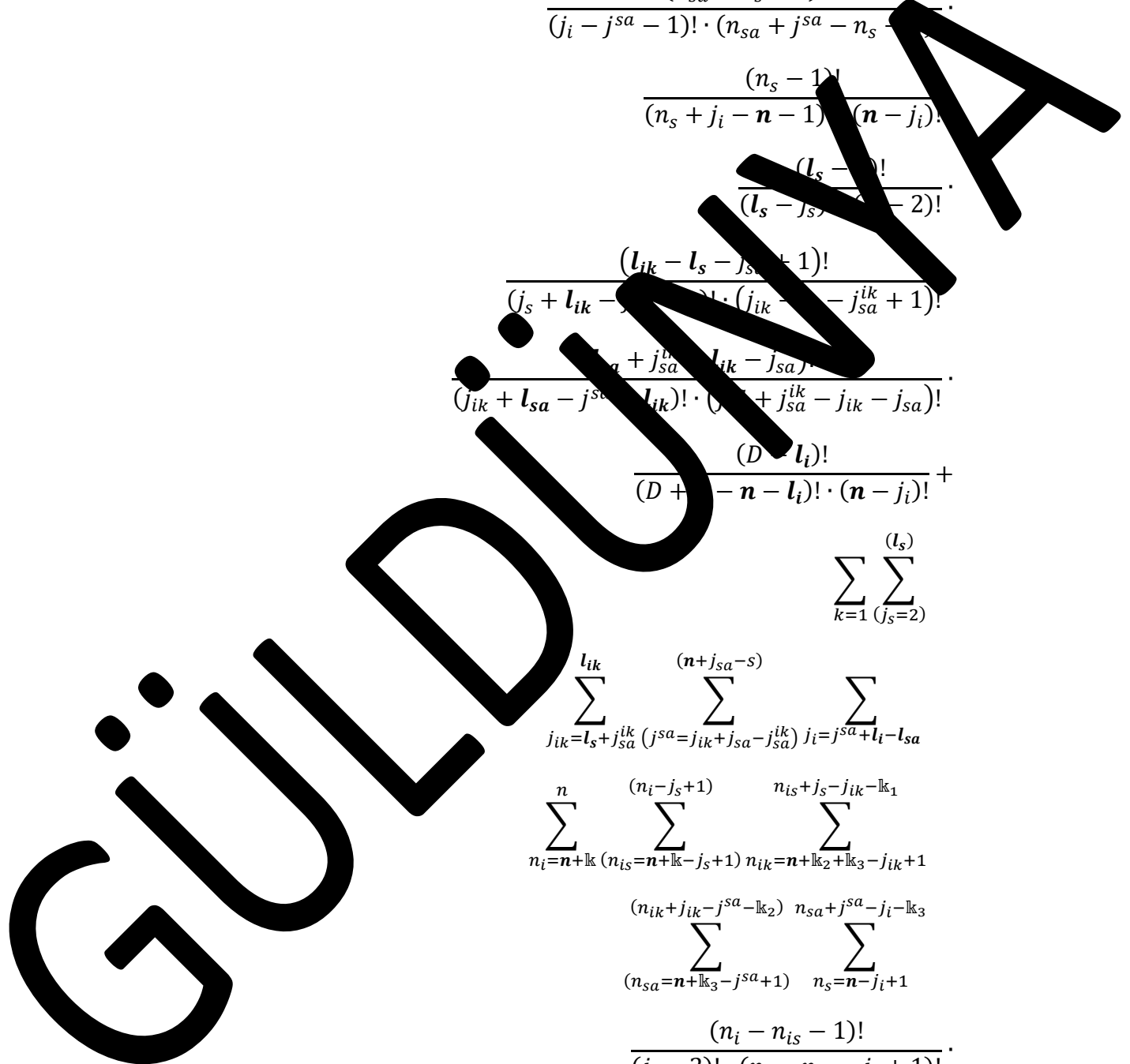
$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k+l_{k_2}+l_{k_3}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n+l_{k_3}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_s=n-j_i+1}^{n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$



$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 1)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa}^{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{\dots}$$

$$\sum_{j_{ik}=l_{sa}+j_{sa}^{ik}-D-j_{sa}^{ik}}^{l_s+j_s-1} \sum_{j_i=j_{sa}+l_i-l_{sa}}^{\dots}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{\dots}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(\dots)} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}^{\dots}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

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$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} \sum_{(j_s=2)}^{(j_s=j_{sa})} \sum_{(l_{ik})}^{(l_{ik})} \sum_{(j_{ik}=l_{ik}-D)}^{(j_{ik}=l_{ik}-D)} \sum_{(j_i=j_{sa}+l_i-l_{sa})}^{(j_i=j_{sa}+l_i-l_{sa})} \sum_{(n_i=n+k_1+1)}^{(n_i=n+k_1+1)} \sum_{(n_{is}=n+k_2+1)}^{(n_{is}=n+k_2+1)} \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_{ik}=n+k_2+k_3-j_{ik}+1)} \sum_{(j_{ik}-j_{sa}-k_2)}^{(j_{ik}-j_{sa}-k_2)} \sum_{(n_{sa}=n+k_3-j_{sa}+1)}^{(n_{sa}=n+k_3-j_{sa}+1)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{l_{sa} + n - l_{sa} + 1}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}}^{l_{ik}} \sum_{j_{ik}+j_{sa}-j_{sa}^{ik}=j^{sa}+l_i-l_{sa}}^{(n-l_i-s)}$$

$$\sum_{n_i=n+l_k}^{(n_i+l_k-1)} \sum_{n_i+l_k-j_s+l_{sa}^{ik}-l_{sa}^{ik}=n+l_{k_2}+l_{k_3}-j_{ik}+1}^{(n_i+l_k-1)}$$

$$\sum_{(n_{sa}=n-l_{k_3}-j^{sa}+1)}^{(n_{sa}=n-l_{k_3}-j^{sa}+1)} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(n_{is} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(l_s)} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa})} \sum_{(j_{sa}^{ik}=j_{sa}-l_{sa})}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{( )} \sum_{(n_{ik}=n_i+j_s-j_{ik}-k_1)}$$

$$\sum_{(n_{sa}=n_{ik}+j_{sa}-k_2)}^{( )} \sum_{(n_{sa}+j_{sa}-j_i-k_3)}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j_{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - k_1 - k_2 - k_3)! \cdot (n + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(l_s - 2)!}{(l_s - j_s)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq s + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_{sa} + s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - l_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\quad)} \sum_{j_i=s}^{l_i}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)}$$

$$\sum_{n_{sa}=n+l_{k_3}-j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}} \sum_{(n_s=n-j_i+l_{k_3})}^{(n_{sa}+j^{sa}-l_i-l_{k_3})}$$

$$\frac{(n_{ik}-l_{k_1}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+l_{k_1}+1)!}$$

$$\frac{(n_{ik}-l_{k_2}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_s-1)!}{(n_s-j^{sa}-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{sa}+j_{sa}^{ik}-j^{sa}-l_{ik})! \cdot (j^{sa}-j_{sa})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}$$

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$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - l_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=1)}$

$\sum_{j_{ik}=j_{sa}^{ik}}^{( )} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{( )} \sum_{j_i=s}^{l_{sa}+s-j_{sa}}$

$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$

$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$

$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}$

$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$



$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_s)} \binom{()}{j_s - k}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(j_s)} \sum_{j_i=s}^{(j_s)}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(j_s-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2}}^{(j_s)} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{sa} + j_{sa}^{ik} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = l_k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k1}, j_{sa}^{ik}, l_{k2}, j_{sa}, l_{k3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_k \wedge$$

$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_i+j_{sa}-s)} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=j^{sa}+l_i-l_s}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_i-j_{ik}-lk_1+1)}^{(n_i-j_{ik}-lk_2+1)}$$

$$\sum_{n_{ik}+j_{ik}-lk_2}^{(n_{sa}+j^{sa}-lk_2)} \sum_{(n_{sa}+j^{sa}-lk_2)}$$

$$\frac{(n_i - n_{ik} - lk_1)!}{(j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} - lk_1 + 1)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-lk_1}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} (n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa})} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_s)} \binom{()}{j_s - k}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(j_s)} \sum_{j_i=s}^{(j_s)}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(j_s-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2}}^{(j_s)} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{sa} + j_{sa}^{ik} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k1}, j_{sa}^{ik}, l_{k2}, j_{sa}, l_{k3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_k \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\ )} \sum_{(j_s=1)}^{(\ )}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(\ )} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\ )} \sum_{j_i=1}^{l_i}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_{ik}=\mathbb{k}_1+1)}^{(n_i-j_{ik}=\mathbb{k}_1+1)}$$

$$\sum_{n_{ik}+j_{ik}=\mathbb{k}_2}^{(n_{sa}+j_{ik}=\mathbb{k}_3)} \sum_{(j_i=n-j_i+1)}^{(j_i=n-j_i+1)}$$

$$\frac{(n_{ik}-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-\mathbb{k}_1+1)!}{(j_{ik}-1)! \cdot (n_{ik}-j_{ik}-\mathbb{k}_1+1)!}$$

$$\frac{(n_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}{(j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_s-n_s-1)!}{(j_i-n_s-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_{ik}-j_{sa}^{ik})!}{(l_{ik}-j_{ik})! \cdot (j_{ik}-j_{sa}^{ik})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{(\ )} \sum_{(j_s=1)}^{(\ )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\ )} \sum_{(j^{sa}=j_{sa})}^{(\ )} \sum_{j_i=s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

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$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} (n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!$$

$$\frac{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}{(D - l_i)!}$$

$$\frac{(D + s - n - l_i)! \cdot (n - \dots)!}{(D + s - n - l_i)! \cdot (n - \dots)!}$$

$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$

$s \geq 5 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{()} \sum_{(j_s=1)}$

$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{()} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{()} \sum_{j_i=s}^{l_{sa}+s-j_{sa}}$

$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$

$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$

$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}$

$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_s)} \binom{()}{j_s - k}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(j_s)} \sum_{j_i=s}^{(j_s)}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2}} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{sa} + j_{sa}^{ik} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$s \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k1}, j_{sa}^{ik}, l_{k2}, j_{sa}, l_{k3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_k \wedge$$

$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\quad)} \sum_{j_i=s}^{l_{ik}+s-j^{sa}_{ik}}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_i-j_{ik}=lk_1+1)}^{(n_i-j_{ik}=lk_1+1)}$$

$$\sum_{n_{ik}+j_{ik}-j^{sa}=lk_2} \sum_{(n_{sa}+j^{sa}=lk_2)}$$

$$\sum_{j^{sa}=1}^{j^{sa}+1} \sum_{=n-j_i+1}$$

$$\frac{(n_i - n_{ik} - lk_1)!}{(j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} - lk_1 + 1)!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j^{sa}_{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j^{sa}_{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j^{sa}_{ik}} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-lk_1}$$

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$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=1)}^{( )}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa})}^{(l_i+j_{sa}-s)} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_s)} \binom{(\cdot)}{j_s - k}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{j_i=s}^{(\cdot)}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_s+1)}^{(j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2}} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{sa}^{ik} + j_{sa}^{ik} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = l_k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k1}, j_{sa}^{ik}, l_{k2}, j_{sa}, l_{k3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa})}^{(l_{sa})} \sum_{j_i=j^{sa}+l_i-l_s}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i=n+k-j_{ik}+1)}^{(n_i-j_{ik}+k_1+1)} \sum_{(n_i=n+k-j_{ik}+1)}^{(n_i-j_{ik}+k_2+k_3-j_{ik}+1)}$$

$$\sum_{(n_i=n+k-j_{ik}+1)}^{(n_{sa}+j_{ik}-k_2-k_3)} \sum_{(n_i=n+k-j_{ik}+1)}^{(n_{sa}+j_{ik}-k_3)}$$

$$\frac{(n_{ik}-n_{ik}-j_{ik}-k_1+1)!}{(j_{ik}-j_{ik}-1)! \cdot (n_{ik}-n_{ik}-j_{ik}-k_1+1)!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(n_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-n_s-1)!}{(j_i-j_i-1)! \cdot (n_{sa}+j^{sa}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_{ik}-j_{sa}^{ik})!}{(l_{ik}-j_{ik})! \cdot (j_{ik}-j_{sa}^{ik})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

GÜLDÜZMAYA

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{( )} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} (n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{( )} \sum_{(j_s=1)}^{( )} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=j^{sa}+l_i-l_{sa}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_s)} \binom{()}{j_s - k}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(j_s)} \sum_{j_i=s}^{(j_s)}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2}} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{sa}^{ik} + j_{sa}^{ik} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k1}, j_{sa}^{ik}, l_{k2}, j_{sa}, l_{k3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_k \wedge$$

$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_i+j_{sa}^{ik}-s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_{ik}-\mathbb{k}_1+1)}^{( )} \sum_{(n_i-j_{ik}-\mathbb{k}_3+1)}$$

$$\sum_{n_{ik}+j_{ik}-j_{sa}^{ik}}^{n_{sa}+j^{sa}-j_{sa}^{ik}} \sum_{(j_i=j^{sa}+1)}^{( )} \sum_{(n-j_i+1)}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1)!}{(j_{ik} - 1)! \cdot (n_i - j_{ik} - \mathbb{k}_1 + 1)!}$$

$$\frac{(n_i - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1} \sum_{(j_s=1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{( )} \sum_{j_i=s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}$$

GÜLDENWA

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j^{sa}-j_i-k_3} \binom{()}{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j^{ik})!} \cdot \binom{()}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j^{ik})!}}{(D - l_i)! \cdot (D + s - n - l_i)! \cdot (n - j^{ik})!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=1)} \binom{()}{(j_s)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{sa}+j_{sa}^{ik}-j_{sa}} \binom{()}{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\sum_{n_{sa}=n+k_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-k_3)}$$

$$\frac{(n_i - n_{ik} - k_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - k_1 + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_s)} \binom{(\cdot)}{j_s - k}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{j_i=s}^{(\cdot)}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_{is}=n+l_k-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2}} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k3}}$$

$$\frac{(n_i + j_{sa}^{ik} + j_{sa}^{ik} - j^{sa} - s - l_{k1} - l_{k2} - l_{k3} - j_{sa}^{ik})!}{(n_i - n - l_{k1} - l_{k2} - l_{k3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = l_k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k1}, j_{sa}^{ik}, l_{k2}, j_{sa}, l_{k3}, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + l_k \wedge$$



$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}} \sum_{(j_{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)} \sum_{j_i=j_{sa}+l_i-l_{ik}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i-j_{ik}=k_1+1)}^{(n_i-j_{ik}=k_1+1)} \sum_{(n_{ik}+j_{ik}-j_{sa}-k_2=k_3)}^{(n_{ik}+j_{ik}-j_{sa}-k_2=k_3)}$$

$$\sum_{(j_{sa}=j_{sa}+1)} \sum_{(j_i=n-j_i+1)}$$

$$\frac{(n_i - n_{ik} - k_1)!}{(j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} - k_1 + 1)!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}$$

GÜLDÜŞMÜŞA

$$\frac{\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} (n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{()} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa})}^{(l_{sa})} \sum_{j_i=s}^{l_i}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_s=1}^{(n)} \sum_{j_{ik}=j_{sa}^{ik} \quad (j^{sa}=j_{sa})} \sum_{j_i=s}^{(n)}$$

$$\sum_{n+l_k}^{(n_i-1)} \sum_{(n_{is}=n+l_k-j_s+1) \quad n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n)} \sum_{n_s=n_{sa}+j^{sa}-j_i-l_{k_3}}$$

$$\frac{(n_i + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - l_{k_3} - j_{sa}^{ik})!}{(n_i - l_{k_1} - l_{k_2} - l_{k_3})! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D > l_i > n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

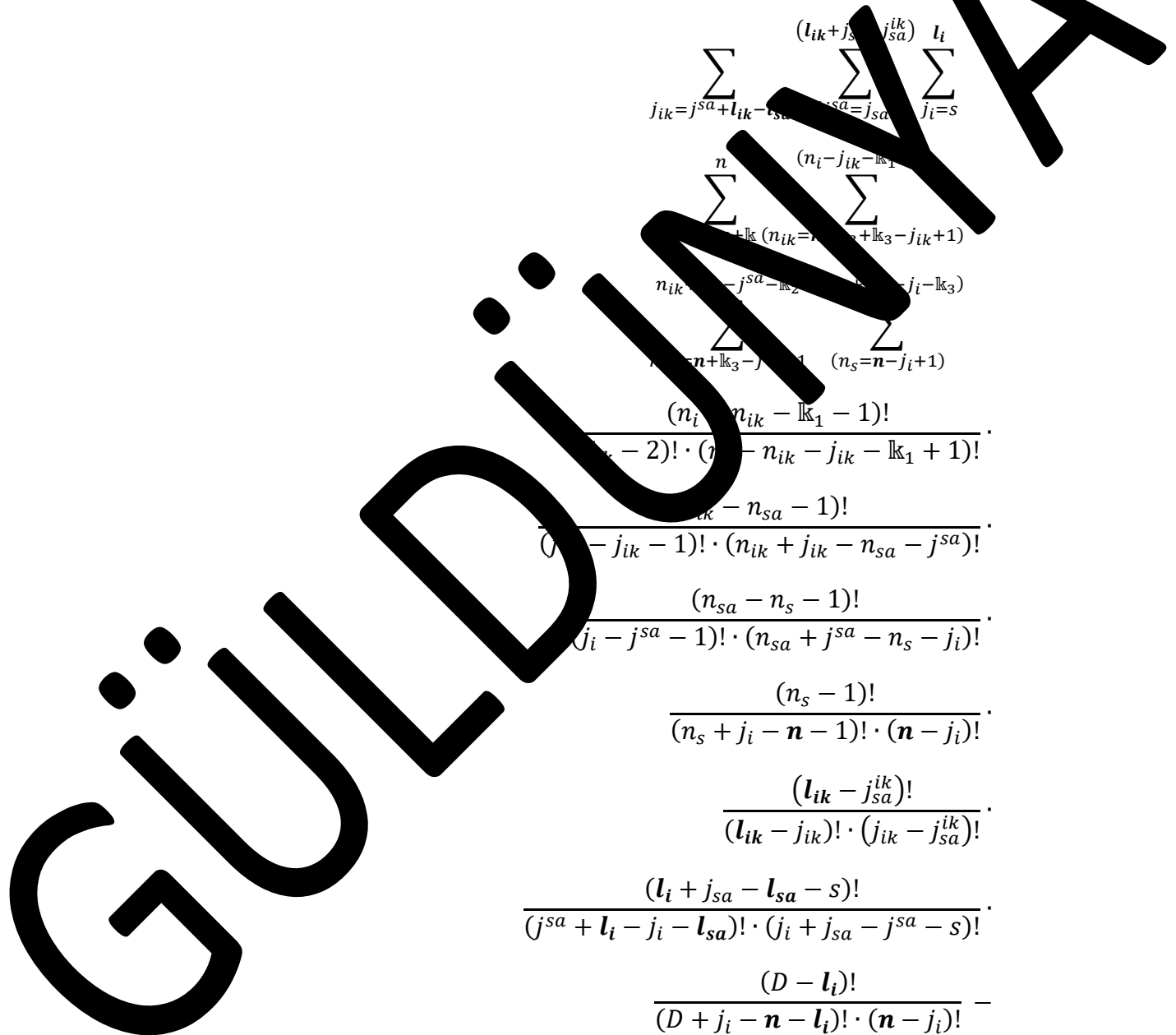
$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)} \frac{\sum_{j_{ik}=j_{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{j_{sa}=j_{sa}}^{(j_{sa}^{ik})} \sum_{j_i=s}^{l_i} \sum_{j_{sa}=n+\mathbb{k}_3-j_{sa}-1}^n \sum_{j_{ik}=n_{ik}-j_{sa}-\mathbb{k}_2}^{(n_i-j_{ik}-\mathbb{k}_1)} \sum_{j_i=n_s-n-j_i+1}^{(n_i-j_{ik}-\mathbb{k}_1)} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(n_i - j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(n_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j_{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j_{sa} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)}$$



$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \sum_{j_i=s} \sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{n_s=n_{sa}+j_{sa}-j_i-k_3} \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - j_s)!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - j_{sa} - j_{ik})! \cdot (n - l_i)!} \cdot (n - n - k_1 - k_2 - k_3)! \cdot (n - s)!$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - 1$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} - j_{sa} \leq j_i \leq$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} = l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^i, k_1, j_{sa}^{ik}, k_2, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + 1 \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1} \sum_{(j_s=1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{( )} \sum_{j_i=j^{sa}+s-j_{sa}}^{l_i}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+k_3-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)}$$

$$\begin{aligned}
 & \sum_{n_{sa} = n + k_3 - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2} \sum_{(n_s = n - j_i + 1)}^{(n_{sa} + j^{sa} - j_i - k_3)} \\
 & \frac{(n_i - n_{ik} - k_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - k_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{sa}^{ik})! \cdot (l_{ik} - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j^{sa} + j_{sa} - j^{sa} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{( )} \sum_{(j_s=1)}^{( )} \\
 & \sum_{j_{ik} = j_{sa}^{ik}}^{( )} \sum_{(j^{sa} = j_{sa})}^{( )} \sum_{j_i = s}^{( )} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}^{( )} \\
 & \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}^{( )} \sum_{n_s = n_{sa} + j^{sa} - j_i - k_3}^{( )} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k_z: z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{j_i=j_{sa}^{ik}+s-j_{sa}} \sum_{j_{sa}=n+k_3-j_{sa}^{ik}+1} \sum_{j_i=j_{sa}^{ik}+s-j_{sa}} \sum_{j_{sa}=n+k_3-j_{sa}^{ik}+1} \sum_{n_i=n+k} \sum_{n_{ik}=n+k_2+k_3-j_{ik}+1} \sum_{n_{sa}=n+k_3-j_{sa}^{ik}+1} \sum_{n_s=n-j_i+1} \frac{(n_i - j_{ik} - k_1 + 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - k_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(l_i + j_{sa} - l_{sa} - s)!}{(j^{sa} + l_i - j_i - l_{sa})! \cdot (j_i + j_{sa} - j^{sa} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \sum_{j_{ik}=j_{sa}^{ik} (j_{sa}^{ik} - j_{sa})}^{(\quad)} \sum_{j_i=s}^{(\quad)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+k_1}^{(\quad)} \sum_{(n_{sa}=n_{ik}+k_2)}^{(\quad)} \sum_{(n_{sa}-j_i-k_3)}^{(\quad)} \frac{(n_i + j_{ik} + j_{sa} - j_{sa}^{ik} - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n_i + j_{sa} - j_{sa}^{ik} - s - j_{sa}^{ik})!} \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i = 1 + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq n + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} - j_{sa} \leq j_{sa}^{ik} < j_i + j_{sa} - s \wedge n + j_{sa}^{ik} - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > 0 \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = k_1 = 0 \wedge$$

$$j_{sa} = j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \dots, k_1, j_{sa}^{ik}, j_{sa}^{ik}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$$k; z = 3 \wedge k = k_1 + k_2 + k_3 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}^{ik}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$



$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}} \sum_{(l_i+j_{sa}-s)}^{(l_i+j_{sa}-s)} \sum_{j_i=j_{sa}^{ik}+l_i-l_{sa}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_i-j_{ik}-l_{k_1}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik}}^{(n_{ik}=n+l_{k_2}+l_{k_3}-j_{ik})} \\
 & \sum_{n_{sa}=n+l_{k_3}-j_{sa}+1}^{(n_{sa}=n+l_{k_3}-j_{sa}+1)} \sum_{(n_s=j_i+1)}^{(n_s=j_i+1)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \\
 & \frac{(n_i - n_s - 1)!}{(j_i - j_{sa} - 1)! \cdot (n_{sa} + j_{sa} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s - j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + l_{k_3} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=1}^{( )} \sum_{(j_s=1)}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{( )} \sum_{(j_{sa}=j_{sa})}^{( )} \sum_{j_i=s}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2})}^{( )} \sum_{n_s=n_{sa}+j_{sa}-j_i-l_{k_3}}^{( )}
 \end{aligned}$$

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$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$j_s, j_{ik}, j^{sa}, j_i = \sum_{k=1}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa})} \sum_{j_i=j^{sa}+l_i-l_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(j_s)} \binom{(\cdot)}{j_s - k}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(j_s)} \sum_{j_i=s}^{(j_s)}$$

$$\sum_{n_{sa}+k}^n \sum_{n_{is}=n_{sa}+j_s+1}^{j_s+1} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{j_s+1}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2}^{(j_s+1)} \sum_{n_s=n_{sa}+j_{sa}-j_i-k_3}^{(j_s+1)}$$

$$\frac{(n_i + j_{sa} + j_{sa}^{ik} - j_{sa} - s - k_1 - k_2 - k_3 - j_{sa}^{ik})!}{(n_i - n - k_1 - k_2 - k_3)! \cdot (n + j_{ik} + j_{sa} - j_{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq j_i + j_{sa} - s \wedge j_{sa} + s - j_{sa} \leq j_i \leq n \wedge$$

$$j_{sa} - j_{sa}^{ik} - 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, k_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + k \wedge$$

$lk_z: z = 3 \wedge lk = lk_1 + lk_2 + lk_3 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\quad)} \sum_{j_i=}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_i-j_{ik}-lk_1+1)}^{(n_i-j_{ik}-lk_1+1)} \sum_{(n_{ik}+j_{ik}-lk_2+lk_3-j_{ik}+1)}$$

$$\sum_{n_{ik}+j_{ik}-lk_2+lk_3-j_{ik}+1}^{(n_{sa}+j^{sa}-lk_3)} \sum_{(j^{sa}+1)}^{(n-j_i+1)}$$

$$\frac{(n_i - n_{ik} - lk_1)}{(j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} - lk_1 + 1)!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - n_s - 1)!}{(j_i - j_i - 1)! \cdot (n_{sa} + j^{sa} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik})!}{(l_{ik} - j_{ik})! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-\mathbb{k}_1}$$

$$\sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3}$$

$$\frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)}{(D + s - l_i)! (n - s)!}$$

$$D \geq n < n \wedge l_s = 1 \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - 1 \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_i + j_{sa} - s \wedge j^{sa} + s \leq j_i \leq j_{sa}^{ik} + s - 1 \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa}^{ik} - j_{sa} = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \mathbb{k}_3, j_{sa}^i\} \wedge$$

$$s \geq 5 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 3 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 + \mathbb{k}_3 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}, j_i} = \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}} \sum_{(j^{sa}=j_i+l_{sa}-l_i)}^{(\quad)} \sum_{j_i=s}^{l_{sa}+s-j_{sa}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+\mathbb{k}_3-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)}$$

$$\sum_{n_{sa}=n+\mathbb{k}_3-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{sa}+j^{sa}-j_i-\mathbb{k}_3)}$$

$$\begin{aligned}
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - n_s - 1)!}{(j_i - j^{sa} - 1)! \cdot (n_{sa} + j^{sa} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(n - j_{sa} - 1)!}{(j_{ik} - j_{sa})! \cdot (j_{sa} - j_{ik})!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik} - 1)! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \sum_{j_i=s}^{(\quad)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \\
 & \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \sum_{n_s=n_{sa}+j^{sa}-j_i-\mathbb{k}_3} \\
 & \frac{(n_i + j_{ik} + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3 - j_{sa}^{ik})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2 - \mathbb{k}_3)! \cdot (n + j_{ik} + j_{sa} - j^{sa} - s - j_{sa}^{ik})!} \cdot \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
 \end{aligned}$$

GÜLDENWA

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- Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin herhangi iki durumunun bulunabileceği olaylara göre
- ilk simetrik olasılık, 2.3.2.1.4.1.1.1/701-702
- Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin herhangi iki durumunun bulunabileceği olaylara göre
- ilk simetrik olasılık, 2.3.2.1.4.1.2.1/701-702
- Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin herhangi iki durumunun bulunabileceği olaylara göre
- ilk simetrik olasılık, 2.3.2.1.4.1.3.1/701-702
- Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre
- ilk simetrik olasılık, 2.3.2.1.5.1.1.1/5
- ilk düzgün simetrik olasılık, 2.3.2.2.5.1.1.1/3-4
- ilk düzgün olmayan simetrik olasılık, 2.3.2.3.5.1.1.1/6
- Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre
- ilk simetrik olasılık, 2.3.2.1.5.1.2.1/5
- ilk düzgün simetrik olasılık, 2.3.2.2.5.1.2.1/3-4
- ilk düzgün olmayan simetrik olasılık, 2.3.2.3.5.1.2.1/6
- Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre
- ilk simetrik olasılık, 2.3.2.1.5.1.3.1/5
- ilk düzgün simetrik olasılık, 2.3.2.2.5.1.3.1/3-4
- ilk düzgün olmayan simetrik olasılık, 2.3.2.3.5.1.3.1/6
- Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre
- ilk simetrik olasılık, 2.3.2.1.5.2.1.1/6-7
- ilk düzgün simetrik olasılık, 2.3.2.2.5.2.1.1/3-4
- ilk düzgün olmayan simetrik olasılık, 2.3.2.3.5.2.1.1/8
- Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre
- ilk simetrik olasılık, 2.3.2.1.5.2.2.1/6-7
- ilk düzgün simetrik olasılık, 2.3.2.2.5.2.2.1/3-4
- ilk düzgün olmayan simetrik olasılık, 2.3.2.3.5.2.2.1/8
- Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre
- ilk simetrik olasılık, 2.3.2.1.5.2.3.1/5
- ilk düzgün simetrik olasılık, 2.3.2.2.5.2.3.1/3-4

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.5.2.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

ilk simetrik olasılık, 2.3.2.1.8.1.1.1/5

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.8.1.1.1/5

dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

ilk simetrik olasılık, 2.3.2.1.8.1.2.1/5

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.8.1.2.1/5

dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

ilk simetrik olasılık, 2.3.2.1.8.1.3.1/5

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.8.1.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

ilk simetrik olasılık, 2.3.2.1.6.1.1/6-7

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.8.2.1.1/5

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

ilk simetrik olasılık, 2.3.2.1.8.2.2.1/6-7

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.8.2.2.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

ilk simetrik olasılık, 2.3.2.1.8.2.3.1/5

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.8.2.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

ilk simetrik olasılık, 2.3.2.1.6.1.1.1/5

ilk düzgün simetrik olasılık, 2.3.2.2.6.1.1.1/3-4

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.6.1.1.1/5

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

ilk simetrik olasılık, 2.3.2.1.6.1.2.1/5

ilk düzgün simetrik olasılık, 2.3.2.2.6.1.2.1/3-4

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.6.1.2.1/5

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

ilk simetrik olasılık, 2.3.2.1.6.1.3.1/5

ilk düzgün simetrik olasılık, 2.3.2.2.6.1.3.1/3-4

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.6.1.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

ilk simetrik olasılık, 2.3.2.1.6.2.1.1/6

ilk düzgün simetrik olasılık, 2.3.2.2.6.2.1.1/3-4

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.6.2.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

ilk simetrik olasılık, 2.3.2.1.6.2.2.1/6

ilk düzgün simetrik olasılık,  
2.3.2.2.6.2.2.1/3-4

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.6.2.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımlı durumlu  
bağımlı simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

ilk simetrik olasılık,  
2.3.2.1.6.2.3.1/4-5

ilk düzgün simetrik olasılık,  
2.3.2.2.6.2.3.1/3-4

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.6.2.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumlu  
simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

ilk simetrik olasılık,  
2.3.2.1.6.4.1.1/5

ilk düzgün simetrik olasılık,  
2.3.2.2.6.4.1.1/3-4

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.6.4.1.1/5

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumlu  
bağımsız simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

ilk simetrik olasılık,  
2.3.2.1.6.4.2.1/5

ilk düzgün simetrik olasılık,  
2.3.2.2.6.4.2.1/3-4

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.6.4.2.1/5

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumlu  
bağımlı simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

ilk simetrik olasılık,  
2.3.2.1.6.4.3.1/5

ilk düzgün simetrik olasılık,  
2.3.2.2.6.4.3.1/3-4

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.6.4.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bağımsız durumlu  
simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

ilk simetrik olasılık,  
2.3.2.1.6.6.1.1/5

ilk düzgün simetrik olasılık,  
2.3.2.2.6.6.1.1/3-4

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.6.6.1.1/5

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bağımsız durumlu  
bağımsız simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

ilk simetrik olasılık,  
2.3.2.1.6.6.2.1/5

ilk düzgün simetrik olasılık,  
2.3.2.2.6.6.2.1/3-4

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.6.6.2.1/5

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bağımsız durumlu  
bağımlı simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

ilk simetrik olasılık,  
2.3.2.1.6.6.3.1/5

ilk düzgün simetrik olasılık,  
2.3.2.2.6.6.3.1/3-4

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.6.6.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımsız durumlu  
simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

ilk simetrik olasılık,  
2.3.2.1.6.7.1.1/6

ilk düzgün simetrik olasılık,  
2.3.2.2.6.7.1.1/3-4

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.6.7.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımsız durumlu  
bağımlı simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

ilk simetrik olasılık,  
2.3.2.1.6.7.2.1/6

ilk düzgün simetrik olasılık,  
2.3.2.2.6.7.2.1/3-4

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.6.7.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımsız durumlu  
bağımlı simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

ilk simetrik olasılık,  
2.3.2.1.6.7.3.1/4-5

ilk düzgün simetrik olasılık,  
2.3.2.2.6.7.3.1/3-4

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.6.7.3.1/5

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

ilk simetrik olasılık,  
2.3.2.1.9.1.1.1/5

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.9.1.1.1/5

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

ilk simetrik olasılık,  
2.3.2.1.9.1.2.1/5

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.9.1.2.1/5

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

ilk simetrik olasılık,  
2.3.2.1.9.1.3.1/5

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.9.1.3.1/5

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

ilk simetrik olasılık,  
2.3.2.1.9.2.1.1/6

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.9.2.1.1/7

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

ilk simetrik olasılık,  
2.3.2.1.9.2.2.1/6

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.9.2.2.1/7

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

ilk simetrik olasılık,  
2.3.2.1.9.2.3.1/4-5

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.9.2.3.1/5

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

ilk simetrik olasılık,  
2.3.2.1.9.4.1.1/5

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.9.4.1.1/7

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

ilk simetrik olasılık,  
2.3.2.1.9.4.2.1/5

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.9.4.2.1/7

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

ilk simetrik olasılık,  
2.3.2.1.9.4.3.1/5

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.9.4.3.1/7

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

ilk simetrik olasılık,  
2.3.2.1.9.6.1.1/5

ilk düzgün olmayan simetrik  
olasılık, 2.3.2.3.9.6.1.1/7

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

ilk simetrik olasılık, 2.3.2.1.9.6.2.1/5  
 ilk düzgün olmayan simetrik olasılık, 2.3.2.3.9.6.2.1/7  
 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  
 ilk simetrik olasılık, 2.3.2.1.9.6.3.1/5  
 ilk düzgün olmayan simetrik olasılık, 2.3.2.3.9.6.3.1/7  
 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  
 ilk simetrik olasılık, 2.3.2.1.9.7.1.1/6  
 ilk düzgün olmayan simetrik olasılık, 2.3.2.3.9.7.1.1/7  
 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  
 ilk simetrik olasılık, 2.3.2.1.9.7.2.1/6  
 ilk düzgün olmayan simetrik olasılık, 2.3.2.3.9.7.2.1/7  
 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  
 ilk simetrik olasılık, 2.3.2.1.9.7.3.1/4  
 ilk düzgün olmayan simetrik olasılık, 2.3.2.3.9.7.3.1/5  
 Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre  
 ilk simetrik olasılık, 2.3.2.1.7.1.1.1/5  
 ilk düzgün simetrik olasılık, 2.3.2.2.7.1.1.1/3-4  
 ilk düzgün olmayan simetrik olasılık, 2.3.2.3.7.1.1.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre  
 ilk simetrik olasılık, 2.3.2.1.7.1.2.1/5  
 ilk düzgün simetrik olasılık, 2.3.2.2.7.1.2.1/3-4  
 ilk düzgün olmayan simetrik olasılık, 2.3.2.3.7.1.2.1/7  
 Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre  
 ilk simetrik olasılık, 2.3.2.1.7.1.3.1/5  
 ilk düzgün simetrik olasılık, 2.3.2.2.7.1.3.1/3-4  
 ilk düzgün olmayan simetrik olasılık, 2.3.2.3.7.1.3.1/7  
 Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre  
 ilk simetrik olasılık, 2.3.2.1.7.2.1.1/7  
 ilk düzgün simetrik olasılık, 2.3.2.2.7.2.1.1/3-4  
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Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

ilk simetrik olasılık, 2.3.2.1.7.4.1.1/5

ilk düzgün simetrik olasılık, 2.3.2.2.7.4.1.1/3-4

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.7.4.1.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

ilk simetrik olasılık, 2.3.2.1.7.4.2.1/5

ilk düzgün simetrik olasılık, 2.3.2.2.7.4.2.1/3-4

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.7.4.2.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

ilk simetrik olasılık, 2.3.2.1.7.4.3.1/5

ilk düzgün simetrik olasılık, 2.3.2.2.7.4.3.1/3-4

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.7.4.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

ilk simetrik olasılık, 2.3.2.1.7.6.1.1/5

ilk düzgün simetrik olasılık, 2.3.2.2.7.6.1.1/3-4

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.7.6.1.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

ilk simetrik olasılık, 2.3.2.1.7.6.2.1/5

ilk düzgün simetrik olasılık, 2.3.2.2.7.6.2.1/3-4

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.7.6.2.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

ilk simetrik olasılık, 2.3.2.1.7.6.3.1/5

ilk düzgün simetrik olasılık, 2.3.2.2.7.6.3.1/3-4

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.7.6.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

ilk simetrik olasılık, 2.3.2.1.7.7.1.1/7

ilk düzgün simetrik olasılık, 2.3.2.2.7.7.1.1/3-4

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.7.7.1.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

ilk simetrik olasılık, 2.3.2.1.7.7.2.1/7

ilk düzgün simetrik olasılık, 2.3.2.2.7.7.2.1/3-4

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.7.7.2.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

ilk simetrik olasılık, 2.3.2.1.7.7.3.1/5

ilk düzgün simetrik olasılık, 2.3.2.2.7.7.3.1/3-4

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.7.7.3.1/7

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

ilk simetrik olasılık, 2.3.2.1.10.1.1.1/5

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.10.1.1.1/5-6



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

ilk simetrik olasılık, 2.3.2.1.10.1.2.1/5

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.10.1.2.1/5-6

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

ilk simetrik olasılık, 2.3.2.1.10.1.3.1/5

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.10.1.3.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

ilk simetrik olasılık, 2.3.2.1.10.2.1.1/7

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.10.2.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

ilk simetrik olasılık, 2.3.2.1.10.2.2.1/7

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.10.2.2.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

ilk simetrik olasılık, 2.3.2.1.10.2.3.1/5

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.10.2.3.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

ilk simetrik olasılık, 2.3.2.1.10.4.1.1/5

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.10.4.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

ilk simetrik olasılık, 2.3.2.1.10.4.2.1/5

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.10.4.2.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

ilk simetrik olasılık, 2.3.2.1.10.4.3.1/5

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.10.4.3.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

ilk simetrik olasılık, 2.3.2.1.10.6.1.1/5

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.10.6.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı

ilk simetrik olasılık, 2.3.2.1.10.6.2.1/5

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.10.6.2.1/7-8

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

ilk simetrik olasılık, 2.3.2.1.10.6.3.1/5

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.10.6.3.1/7-8

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

ilk simetrik olasılık, 2.3.2.1.10.7.1.1/7

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.10.7.1.1/7-8

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

ilk simetrik olasılık, 2.3.2.1.10.7.2.1/7

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.10.7.2.1/7-8

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

ilk simetrik olasılık, 2.3.2.1.10.7.3.1/5

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.10.7.3.1/5-6

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

ilk simetrik olasılık, 2.3.2.1.11.1.1.1/6

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.11.1.1.1/6

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

ilk simetrik olasılık, 2.3.2.1.11.1.2.1/6

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.11.1.2.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

ilk simetrik olasılık, 2.3.2.1.11.1.3.1/6

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.11.1.3.1/6

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

ilk simetrik olasılık, 2.3.2.1.11.2.1.1/8-9

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.11.2.1.1/9

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

ilk simetrik olasılık, 2.3.2.1.11.2.2.1/9

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.11.2.2.1/9

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

ilk simetrik olasılık, 2.3.2.1.11.2.3.1/6

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.11.2.3.1/6

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

ilk simetrik olasılık, 2.3.2.1.11.4.1.1/6

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.11.4.1.1/9

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

ilk simetrik olasılık, 2.3.2.1.11.4.2.1/6

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.11.4.2.1/9

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

ilk simetrik olasılık,  
2.3.2.1.11.4.3.1/6

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.11.4.3.1/9

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

ilk simetrik olasılık,  
2.3.2.1.11.6.1.1/6

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.11.6.1.1/9

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

ilk simetrik olasılık,  
2.3.2.1.11.6.2.1/6

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.11.6.2.1/9

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

ilk simetrik olasılık,  
2.3.2.1.11.6.3.1/6

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.11.6.3.1/9

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

ilk simetrik olasılık,  
2.3.2.1.11.7.1.1/8-9

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.11.7.1.1/9

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

ilk simetrik olasılık,  
2.3.2.1.11.7.2.1/8-9

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.11.7.2.1/9

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

ilk simetrik olasılık,  
2.3.2.1.11.7.3.1/6

ilk düzgün olmayan simetrik olasılık, 2.3.2.3.11.7.3.1/6

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 dağılımlardan, bağımsız olasılıklı durumla başlayıp ilk bağımlı durumu bağımlı olasılıklı dağılımın ilk bağımlı durumu olan ve bağımlı olasılıklı dağılımın ilk bağımlı durumuyla başlayan dağılımlarda, simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre ilk düzgün olmayan simetrik olasılığın, tanım ve eşitliklerinden oluşmaktadır.

VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre ilk düzgün olmayan simetrik olasılık kitabında, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlardan, bağımsız olasılıklı durumla başlayıp ilk bağımlı durumu bağımlı olasılıklı dağılımın ilk bağımlı durumu olan ve bağımlı olasılıklı dağılımın ilk bağımlı durumuyla başlayan dağılımlarda, simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre ilk düzgün olmayan simetrik olasılığın, tanım ve eşitlikleri verilmektedir.

VDOİHİ’nin diğer ciltlerinde olduğu gibi bu ciltte de verilen eşitlikler, olasılık tablolarından elde edilen verilerle üretilmiştir. Diğer eşitlikler ise ana eşitliklerden teorik yöntemle üretilmiştir. Eşitlik ve tanımların üretilmesinde dış kaynak kullanılmamıştır.