

# VDOİHİ

Bağımlı ve Bir Bağımsız Olasılıklı  
Farklı Dizilimsiz Bağımlı Durumlu  
Simetrisinin İlk Herhangi Bir ve Son  
Durumunun Bulunabileceği Olaylara  
Göre Tek Kalan Düzgün Olmayan  
Simetrik Olasılık

Cilt 2.3.3.3.6.1.1.51

İsmail YILMAZ

**Matematik / İstatistik / Olasılık**

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**VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre tek kalan düzgün olmayan simetrik olasılık Cilt 2.3.3.3.6.1.1.51**

*İsmail YILMAZ*

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

*Dili: Türkçe + Matematik Mantık*



*K. Atatürk*

Türkiye Cumhuriyeti Devleti  
Kuruluşunun  
100. Yılı Anısına

## DÜZELTME

Bu cilt için

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

simgesi yerine

$fz^{DOST}_{j_s, j_{ik}, j_i}$

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.

## VDOİHİ

Veri Değişkenleri Olasılık ve İhtimal Hesaplama İstatistiği (VDOİHİ) ile olasılık ve ihtimal yasa konumuna getirilmiştir.

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- ✓ Dillerin matematik yapısı olduğu gösterilmiştir.
- ✓ Tüm tabanlarda, tüm dağılım türlerinde ve istenildiğinde dağılım türü ve tabanı değiştirerek çalışabilecek elektronik teknolojisinin temelidir.
- ✓ Teorik kabullerle genetikle ilişkilendirilmiştir.
- ✓ 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

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

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

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

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

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

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

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

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

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

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

${}^0 f_Z S_{j_s,j_i}^{DST}$ : 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 tek kalan simetrik olasılık

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

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durumunun bulunabileceği olaylara göre tek kalan simetrik olasılık

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

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simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre tek kalan simetrik olasılık

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durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı tek kalan simetrik olasılık

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herhangi iki ve son durumuna bağlı tek kalan simetrik olasılık

$fz \overset{DSSST}{S}_{j_i}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin son durumunun bulunabileceği olaylara göre tek kalan düzgün simetrik olasılık

$fz \overset{DSSST}{S}_{j_i,0}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre tek kalan düzgün simetrik olasılık

$fz \overset{DSSST}{S}_{j_i,D}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre tek kalan düzgün simetrik olasılık

${}^0 \overset{DSSST}{fz \Rightarrow} j_i$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız veya bağımlı-bağımsız durumlu simetrisinin son durumunun bulunabileceği olaylara göre tek kalan düzgün simetrik olasılık

${}^0 \overset{DSSST}{fz \Rightarrow} j_i,0$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız veya bağımlı-bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre tek kalan düzgün simetrik olasılık

${}^0 \overset{DSSST}{fz \Rightarrow} j_i,D$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız veya bağımlı-bağımsız durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre tek kalan düzgün simetrik olasılık

$f_Z S_{j_s^{sa}}^{DSST}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin durumuna bağlı tek kalan düzgün simetrik olasılık

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

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$fz S_{j_{ik}, j^{sa}}^{DSST}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin herhangi iki durumuna bağlı tek kalan düzgün simetrik olasılık

$fz S_{j_{ik}, j^{sa}, 0}^{DSST}$ : bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin herhangi iki durumuna bağlı tek kalan düzgün simetrik olasılık

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# E2

## BAĞIMLI ve BİR BAĞIMSIZ OLASILIKLI FARKLI DİZİLİMSİZ DAĞILIMLAR

### Bağımlı ve Bir Bağımsız Olasılıklı Farklı Dizilimsiz Dağılımlar

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

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

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

Bağımlı dağılım ve bir bağımsız olasılıklı durumla oluşturulabilen dağılımlara ve bağımlı olasılıklı dağılımların kendi olay sayısından (bağımlı olay sayısı) büyük olasılara (bağımsız olay sayısı) dağılımlarla bağımlı ve bir bağımsız olasılık dağılımlar elde edilir. Farklı dağılım farklı dizilimsiz dağılımlarda oluşturduğunda, 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'yu Çift Durumlu olarak 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 durumlu/bağımsız/bağımsız/bağımlı" kelimeleri getirilerek, simetrinin bağımlı durumlarının bulunabileceği olaylara göre bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz adları elde edilecektir. Simetriden seçilen durumların bulunabileceği olaylara göre simetrik, düzgün simetrik veya düzgün olmayan simetrik olasılık için birden fazla ad kullanılması durumunda gerekmedikçe yeni tanımlama yapılmayacaktır.

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

Bu eşitlikte bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlardan, bağımsız olasılıklı durumla başlayıp ilk bağımlı durumu bağımlı olasılıklı dağılımın ilk bağımlı durumuyla başlayan dağılımın başlayabileceği diğer bir bağımlı durum olan ve bağımsız olasılıklı durumla başlayan dağılımın aynı ilk bağımlı durumuyla başlayan dağılımlarda, simetrinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre tek kalan düzgün olmayan simetrik olasılığın eşitlikleri verilmektedir.

**SİMETRİDEN SEÇİLEN ÜÇ DURUMA GÖRE TEK KALAN DÜZGÜN OLMAYAN SİMETRİK OLASILIK**

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{zS} S_{j_s, j_{ik}}^{j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

$$D \geq n < n - l_k > D \wedge$$

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

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

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

$$l_{k_z}: z = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

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



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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{(n_i - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{ik} + l_k - j_s + 1)}$$

$$\sum_{(n_{is} + j_{ik} - l_{k_1})}^{(n_{is} + j_{ik} - l_{k_1})} \sum_{(n_{ik} - j_i - l_{k_2})}$$

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

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

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

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

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

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

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_s-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - 2) \cdot (n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - 1) \cdot \dots \cdot 1}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - n - 2) \cdot (n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - n - 1) \cdot \dots \cdot (n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - 1) \cdot (n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2})!}$$

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

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

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

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

$$D \geq n < n \wedge l_s - l_{k_1} \geq 0$$

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

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

$$s = j_{sa}^s = s + l_{k_1} \wedge$$

$$l_{k_2}: z = 2 \wedge l_{k_2} = l_{k_1} + l_{k_2} \Rightarrow$$

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

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

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

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

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

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

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

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

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

$$\sum_{s=1}^l \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^n$$

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

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}} \binom{(\quad)}{\sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k2})}}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

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

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

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

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

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

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

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

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

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

$$s = 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z S_{j_s}^{(l_i+n-D-s)} \sum_{k=0}^{j_s-1} \sum_{l=0}^{(l_i+n-D-s)-j_{sa}^{ik}+1} \sum_{j=0}^{(l_i-l+1)-j_{sa}^{ik}+1} \sum_{i_{ik}=j_s+j_{sa}^{ik}-1}^{(j_i=l_i+n-D)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$



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

GÜLDENWA

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

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

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

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

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

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

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

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, j_{sa}^i\} \wedge$$

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

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=l_s+n-D)}$$

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

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

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

$$\begin{aligned}
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=0}^{(l_s - l + 1)} \sum_{l_i = D - s + 1}^{(l_s - l + 1)} \sum_{j_s = j_s + j_{sa}^{ik} - 1}^{(j_s - l)} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(n - j_s + 1)} \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - k_2)}^{(n - j_s + 1)} \\
& \frac{(n_i + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_i + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

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

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{ik}, j_i} \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_s=j_{ik}-j_{sa}^{ik}+1} \sum_{j_i=l_i+l-1}^{j_i=l_i+l-1} \sum_{j_{ik}=j_i+n-D}^{j_{ik}=j_i+n-D} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{(n_s-1)!}$$

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

GÜLDÜNKYA

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

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

$$D + j_s + s - n - l_i - 1 \leq l \leq D - n + 1 \wedge$$

$$l \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

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

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

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

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

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

$$s = 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned}
 f_{zS_{j_s, j_{ik}, j_i}} &= \sum_{k=l}^{(\quad)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)} \\
 &\sum_{j_{ik} = l_s + n + j_{sa}^{ik} - D - 1}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = l_i + n - \dots)}^{(l_i - l + 1)} \\
 &\sum_{n_i = n + k}^n \sum_{(n_{is} = \dots - j_s + 1)}^{(n_i - j_s + 1)} \\
 &\sum_{n_{ik} = n + k_2 - j_{ik} - 1}^{\Delta} \sum_{(n_s = n - j_i + \dots)}^{\Delta} \\
 &\frac{(n_s - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \\
 &\frac{(n_{is} - j_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \cdot \\
 &\frac{(n_s - n_s - 1)!}{(n_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 &\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 &\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 &\sum_{k=l}^{(\quad)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)} \\
 &\sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(\quad)}
 \end{aligned}$$

GÜLDÜZÜMÜ

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_i - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

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

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n +$$

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

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

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

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

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

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

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

$$\mathbb{k}_2: z = 2 \wedge \mathbb{k} = \mathbb{k}_2 \Rightarrow$$

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

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



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

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

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

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

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

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

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

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

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

$$s = 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

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

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

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

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

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

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

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

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

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

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

$$s = 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}$$

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

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

$$\sum_{n_{ik}=n+l_{k_2}-j_{i_2}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}+1} \sum_{(n_s=n-j_i+l_{k_2})}^{(j_{ik}-l_{k_1}+1)}$$

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

$$\frac{(n_{is} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!}$$

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

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

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=l_s+n-D)}$$

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

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

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

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

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

$$\begin{aligned}
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(l_s - l)!}{(D + j_s - n - l_i)! \cdot (j_i - l_i)!} + \\
& \sum_{k=0}^{(l_s - l + 1)} \sum_{l_s = D - s + 1}^{(l_s - l + 1)} \\
& \sum_{j_i = j_s + j_{sa}^{ik} - 1}^{l_i + j_s - l - s + 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{( )} \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
\end{aligned}$$



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

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

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

$$\sum_{n+kk}^{(n_{is} = n_{is} + 1)}$$

$$\sum_{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} - n_s - i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

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

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

$$D \geq n < n \wedge l_i = D - n - 1 \wedge$$

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

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

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

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

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

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

$$s = 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

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

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

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

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

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

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

$$\frac{(l_{ik}-l_s+j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_i-l_s)! \cdot (j_s-j_s-j_{sa}^{ik}+1)!} \cdot$$

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is}+n_{ik}+j_{ik}+l_{k_1}-n_s-j_i-s-2 \cdot l_k)!}{(n_{is}+n_{ik}+j_s+j_{ik}+l_{k_1}-n_s-j_i-n-2 \cdot l_k-j_{sa}^s)!} \cdot$$

$$\frac{1}{(n+j_{sa}^s-j_s-s)!} \cdot$$

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

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}$$

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

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

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

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

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

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

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{(\cdot)} \sum_{(n_{ik}+j_{ik}-j_i)}^{(\cdot)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots + j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} + l_{k_1} - j_i - j_{sa}^{ik} - j_{sa}^s)!} \cdot \frac{1}{(j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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

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

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

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

$$D \geq n < n - l_k > D \wedge$$

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

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

$$s - s + s = s + l_k \wedge$$

$$l_{k_z}: z = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

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

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

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



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

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

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

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

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

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

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

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

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

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

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

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

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



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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_1 - n_s - j_i - s - 2 \cdot l_1)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_1 - n_s - j_i - n - 2 \cdot l_1 - j_{sa}^s)!} \cdot \frac{(j_{sa}^s - s)!}{(l_1 - l - 1)!} \cdot \frac{(l_s - j_s - l + 1)! \cdot (j_s - l)!}{(D - j_i - n - j_i)!}$$

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

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n +$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + l_1 - j_{sa}^{ik} \leq j_i - j_{sa}^{ik} - s$$

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

$$l_{ik} - j_{sa}^{ik} + 1 > l_1 \wedge l_i + j_{sa}^{ik} - s \leq l_{ik} \wedge$$

$$D \geq n \wedge l = l_1 = 0 \wedge$$

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

$$s: \{j_{sa}^i, l_1, j_{sa}^{ik}, l_2, j_{sa}^{ik}\}$$

$$s = 3 \wedge s = s + l_1 \wedge$$

$$l_2: z = 2 \wedge l_2 = l_2 \Rightarrow$$

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

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

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

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

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

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

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

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

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

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

$$s = 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

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



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

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

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

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

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

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

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

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

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

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+l_i-j_i-l_{k_2})}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_i - l_{k_2})!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - l_i - l_{k_2})! \cdot (j_{sa}^s)!}$$

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

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

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

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

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

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

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

$$D \geq n < n \wedge l_s - l_{ik} \geq 0$$

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

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

$$s = j_{sa}^s = s + l_{k_1} \wedge$$

$$l_{k_z}: z = 2 \wedge l_{k_z} = l_{k_1} + l_{k_2} \Rightarrow$$

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

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

$$\begin{aligned}
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=0}^{l_i - l} \sum_{j_s = l_i + n - D - s + k}^{l_i - l - k} \frac{(l_i - l + 1)!}{j_{ik}^{l_i - l + 1} + j_{sa}^{ik} - 1} (j_i = j_{ik} + s - j_{sa}^{ik}) \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
\end{aligned}$$

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

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

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

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

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

$$\sum_{n_{ik} = n_{is} - j_{ik} - k_1}^{(n_{ik} + j_{ik} - j_i - k_2)}$$

$$\frac{(n_{is} + n_{ik} - j_{ik} + k_1 - n - j_i - s - 2 \cdot k)!}{(n_{is} + j_{sa}^{ik} + k_1 - n - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

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

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

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

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

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

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

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

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

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

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

$$s = 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

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

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

$$\sum_{(n_i=n+l)}^{(n_i+l+1)}$$

$$\sum_{(n_{is}=n+k)}^{(n_{is}+1)}$$

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

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

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

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

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

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

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!}$$

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

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

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

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

$$\sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s+l_2)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+l_1-j_i-l_{k_2})}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_1 - 2 \cdot \dots)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot \dots - j_{sa}^s)!} \cdot$$

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

$$\frac{(l_s - \dots - l + 1)! \cdot (j_s - 2)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq \dots = n + 1$   
 $1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} = j_i + j_{sa}^{ik} - s \wedge$   
 $j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$   
 $l_{ik} - j_{sa}^{ik} + \dots = l_s \wedge l_{ik} + j_{sa}^{ik} - s > l_{ik}$   
 $l_i \leq D + s - n$   
 $D \geq \dots < n \wedge l = l_k > 0 \wedge$   
 $j_{sa}^{ik} = j_{sa}^i - \dots \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$   
 $s: \{j_{sa}^{ik}, l_{k_2}, j_{sa}\} \wedge$   
 $s = 3 \wedge s = \dots + l_k \wedge$   
 $\dots \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$

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

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

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

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

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

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

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

$$l_i \leq D + s - n \wedge$$

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

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

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

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

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=s+1)}^{( )}$$

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_k}^{( )} \sum_{(n_{ik}+j_{ik}-j_i=...)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + \dots + j_{ik} + l_{k_1} - \dots - j_i - \dots - l_k - j_{sa}^s)!}$$

$$\frac{1}{+ j_{sa}^s - j_s - s)!}$$

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

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

$$D \geq n < n \wedge l \neq 1 \wedge l_s \leq D - n - 1 \wedge$$

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

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

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

$$l_i \leq D + s - 1 \wedge$$

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

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

$$s \in \{j_{sa}^{ik}-1, j_{sa}^{ik}, l_{k_2}, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + l_k \wedge$$

$$l_{k_2}: z = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

$$\begin{aligned}
 f z_{j_s, j_{ik}, j_i}^S &= \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{s_a}^{ik}+1)}^{(\quad)} \\
 &\quad \sum_{j_{ik}=j_{s_a}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{s_a}^{ik})}^{(l_i-l+1)} \\
 &\quad \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 &\quad \sum_{n_{ik}=n+l_{k_2}-j_{s_2}^{ik}+1}^{n_{is}+j_s-j_{ik}-j_{s_2}^{ik}+1} \sum_{(n_s=n-j_i+j_{s_2}^{ik}-l_{k_2})}^{(n_i-j_s+1)} \\
 &\quad \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 &\quad \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 &\quad \frac{(n_i - n_s - 1)!}{(n_{ik} + j_{ik} - n_s - j_i)!} \\
 &\quad \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &\quad \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 &\quad \frac{(l_i + j_{s_a}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{s_a}^{ik} - j_{ik} - s)!} \\
 &\quad \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

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

$$\sum_{j_{ik}=j_{s_a}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{s_a}^{ik})}^{(\quad)}$$

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

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

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

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

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

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

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

$$l_i \leq D + s - n \wedge$$

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

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

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

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

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 \wedge \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{\binom{(\cdot)}{j_s=j_{ik}-j_{sa}^{ik}+1}}$$

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

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



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

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

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

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

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

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

$$l_i \leq D + s - n \wedge$$

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

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

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

$$s = 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

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

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

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

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

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

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

$$\sum_{k=2}^{(l_{ik} - l - j_{sa}^{ik} + 1)}$$

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

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

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - k_2)}$$

$$\frac{(n_{ik} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

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

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

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

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

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

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

$$l_i \leq D + s - n \wedge$$

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

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

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

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

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

$$\sum_{i=n+l}^n \sum_{(n_{is}=n_{is}+1)}$$

$$\sum_{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} - \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

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

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

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

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_{zS_{j_s, j_{ik}, j_i}} &= \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{s_a}^{ik}+1)}^{(\quad)} \\
 &\sum_{j_{ik}=j_{s_a}^{ik}+1}^{j_i+j_{s_a}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_{ik}+s-l-j_{s_a}^{ik}+1)} \\
 &\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n+l_{k_2}-j_{ik}^{k_2}}^{\Delta} \sum_{(n_s=n-j_i+l_{k_2})}^{\Delta} \\
 &\frac{(n_s - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \\
 &\frac{(n_{is} - j_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \cdot \\
 &\frac{(n_s - n_s - 1)!}{(n_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 &\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 &\frac{(l_i + j_{s_a}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{s_a}^{ik} - j_{ik} - s)!} \cdot \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{s_a}^{ik}+1)}^{(\quad)} \\
 &\sum_{j_{ik}=j_{s_a}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=l_{ik}+s-l-j_{s_a}^{ik}+2)}^{(l_i-l+1)}
 \end{aligned}$$

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

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

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

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



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

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

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

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

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

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

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

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

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

$$\sum_{n_{ik}=n+l_k-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_k-1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_k-2)}$$

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

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

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

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

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

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

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

$$\sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1, \dots)}$$

$$\sum_{(j_s = j_i + j_{sa}^{sa}, \dots)}$$

$$\sum_{(n_{ik} = n_{is} - j_{ik} - l_{k_1}, \dots)}$$

$$\sum_{(n_{ik} = n_{is} - j_{ik} - l_{k_1}, \dots)}$$

$$\frac{(n_{is} + n_{ik} - j_{ik} + l_{k_1} - n_{ik} - j_i - s - 2 \cdot l_{k_2})!}{(n_{is} + n_{ik} - j_{ik} + l_{k_1} - n_{ik} - j_i - n - 2 \cdot l_{k_2} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

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

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

$$D \geq n < n \wedge l \neq i \wedge l \leq D - n + 1 \wedge$$

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

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

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

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

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

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

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

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

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

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

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

$$\sum_{(j_i=j_{ik}+n-D)}^{(n_i-l+1)}$$

$$\sum_{(n_i-l+1)}$$

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

$$\sum_{(j_i-j_{ik}-\mathbb{k}_1)}^{(j_i-j_{ik}-\mathbb{k}_2)}$$

$$\sum_{(n_{ik}=n_{is}-j_{ik}+1)}^{(n_{is}-j_i+1)}$$

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

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

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

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

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

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

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

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

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

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

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

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

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

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

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

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

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

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

$$\sum_{s=1}^{l_i} \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{l_i}$$

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{j_{ik}=l_i+n_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{(n_i-j_s+1)} \sum_{(n_{ik}+l_k-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{ik}-l_{k_1}} \sum_{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_i - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_i - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

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

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

$$\geq n < n \wedge l \neq i \wedge l \leq D - n + 1 \wedge$$

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

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

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

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

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

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

$$\begin{aligned}
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (j_i - l_i)!} + \\
& \sum_{k=0}^{(l_s - l + 1)} \sum_{l=0}^{(D - s + 1)} \frac{(l_i - l + 1)!}{\sum_{j_s = j_s + j_{sa}^{ik} - 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}} \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot
\end{aligned}$$

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

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

$$D + l_s + s - n - l_i = 1 \leq l \leq l_i - 1 \wedge$$

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

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

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

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

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

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

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

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

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

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

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

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

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

$$\sum_{(n_{is}-j_{ik}-\mathbb{k}_1)}^{(n_{is}-j_{ik}-\mathbb{k}_1)} \sum_{(n_{is}+j_{ik}-j_i-\mathbb{k}_2)}^{(n_{is}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\sum_{n_{ik}=j_{is}-j_{ik}+1}^{(n_{is}-j_{ik}+1)} \sum_{(j_i+1)}^{(j_i+1)}$$

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

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - n)!}$$

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

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i \wedge l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + l_i - 1 \leq j_i \leq j_{ik} - s$$

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

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

$$D + s - n - l_i \leq D - l_{ik} + s - n - j_{sa}^{ik}$$

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

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

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

$$s = j_{sa}^s + j_{sa}^{ik} + j_{sa}^i$$

$$l_{k_z}: z = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

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

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

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

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

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

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

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

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

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

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

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

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

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

$$\mathbb{k}_2: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{zS}^{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{(j_s=2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$



$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_i - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=0}^{\lfloor \frac{l_i - j_i + 2}{2} \rfloor} \sum_{i_s = l_i + n - D - s + 1}^{i_s} \\
 & \sum_{i_k = j_s + j_{sa}^{ik} - 1}^{i_k} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{( )} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}}^{(l+1)}$$

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

$$\sum_{n_i+l_k-j_{ik}-k_1}^{(n_i+l_k-j_{ik}-k_2)} \sum_{(n_s=n-j_i+1)}$$

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

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

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

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

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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

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

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$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=s+1)}^{(l_s+s-l)}$$

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+l_{k_2}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2})!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2})! \cdot (n - j_i - l_{k_2})!} \cdot \frac{1}{(n - j_s - j_s - s)!}$$

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

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

$$D \geq n < n \wedge l \neq i \wedge l_s \leq n + 1$$

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

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

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

$$l_{ik} \leq D + j_{sa}^{ik} - 1$$

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

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

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

$$s = 3 \wedge s = j_{sa}^{ik} + l_{k_2} \wedge$$

$$l_{k_2} \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

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

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{( )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}
 \end{aligned}$$

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

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, n, i} = \sum_{k=l}^{s-l+1} \sum_{(j_s=2)}^{(s-l+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{k-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

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

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

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

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

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

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

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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

$$\sum_{k=1}^{(l_s - l + 1)} \sum_{j_s=2}$$

$$\sum_{j_{ik}=j_s + j_{sa}^{ik}} \sum_{j_i=j_{ik} + s - j_{sa}^{ik}}$$

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

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

$$\frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + k + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

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

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

$$D > n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

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

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

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

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

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



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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik})} \sum_{(j_s=2)}^{(j_s-l)} \dots$$

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

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

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

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

$$\dots \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\dots \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

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

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$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l)! (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

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

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

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

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

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

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

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

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

$$\mathbb{k}_2: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_s=2)}^{( )} (j_i=j_{ik}+s-j_{sa}^{ik})$$

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

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

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

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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

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

$$\sum_{j_s=j_{ik}+j_{sa}^{ik}-D+1}^{l_s+j_s+l} \sum_{j_{ik}+j_{sa}^{ik}-j_{ik}+s-j_{sa}^{ik}}$$

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

$$\sum_{n_{is}+j_{ik}-k-k_1}^{( )} \sum_{n_s=n_{ik}+j_{ik}-j_i-k_2}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + k + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

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

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

$$D > n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

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

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

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

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

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

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

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

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

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

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!}$$

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}$$

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$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

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

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

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

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

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

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

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

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

$$\mathbb{k}_2: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)} \sum_{j_{ik}=j_i + j_{sa}^{ik} - s}^{(l_s + s - l)} \sum_{(j_i = l_{ik} + n + s - D - j_{sa}^{ik})} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$



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

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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

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

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

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

$$\sum_{n_{is}=n+l_k-l_{k_1}}^{( )} \sum_{n_s=n_{ik}+j_{ik}-j_i-l_{k_2}}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + l_k + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

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

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

$$D > l_i \wedge n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik})} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik})} \sum_{j_{ik}=l}^{l+j_s} \sum_{j_i=n-D}^{n-D} (j_i=j_{ik}+s-1) \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{i_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}+1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

GÜLDENMÄ

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

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

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

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

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

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

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

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

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-j_s-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!}$$

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}$$

GÜLDÜSİMYA

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

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

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

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

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

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

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

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

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

$$\mathbb{k}_2: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz_{j_s, j_{ik}, j_i}^S = \sum_{k=l}^{(l_{ik} + n - D - j_{sa}^{ik})} \sum_{(j_s=2)}$$

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

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

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

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

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=l_i}^{(l_i+1)} \frac{\binom{l_i+1}{k} \binom{l_i+1}{n-l_i-k} \binom{l_i+1}{j_{ik}+1}}{\binom{l_i+1}{j_s+j_{sa}^{ik}-l_i-k} \binom{l_i+1}{j_{ik}+s-j_{sa}^{ik}}} \cdot \sum_{k_1=0}^{n-l_i-k} \binom{l_i+1}{k_1} \binom{l_i+1}{n-l_i-k-k_1} \binom{l_i+1}{n-l_i-k-k_1-j_s+1} \cdot \sum_{k_2=0}^{(n-l_i-k-k_1)} \binom{l_i+1}{k_2} \binom{l_i+1}{n-l_i-k-k_1-k_2} \binom{l_i+1}{n-l_i-k-k_1-k_2-j_s+1} \cdot \frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + k + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > l_i \wedge n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=1}^{l_s-l+1} \sum_{j_s=2}^{(l_s-l+1)}$$

$$j_{ik} = j_i + j_s \quad (j_i = l_i + n - D)$$

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

$$n_{ik} = n - j_{ik} - \mathbb{k}_1 \quad (n_{ik} = n - j_{ik} - \mathbb{k}_2)$$

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

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

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

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

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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



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

$$\begin{aligned}
 & D \geq n < n \wedge l \neq l \wedge l_s \leq D - n - 1 \wedge \\
 & D + l_s + s - \dots - l_i + \dots \leq l \leq l - 1 \wedge \\
 & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} - 1 \wedge j_s + \dots \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge \\
 & j_{ik} + s - \dots \leq j_i \leq n \\
 & l_{ik} - j_{sa}^{ik} + 1 \leq l_s \wedge l_{ik} - j_{sa}^{ik} - s = l_{ik} \wedge \\
 & D - \dots < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge \\
 & D \geq n < n \wedge l = l_k \geq 0 \wedge \\
 & j_{sa}^s - j_{sa}^s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge \\
 & s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i\} \wedge \\
 & s = 3 \wedge s = s + l_k \wedge \\
 & l_{k_2}: z = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow
 \end{aligned}$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)}$$

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

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

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

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

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

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

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

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq i \wedge l - 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + l_i - 1 \leq j_i \leq j_{ik} - s$

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

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

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

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

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

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

$s = 2 \wedge s = s + 1$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

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

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

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

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

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

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

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

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

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

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

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

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

$$\frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - j_s - 1)! \cdot (j_{ik} - j_s - l_s + 1)!} \cdot$$

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

$$\sum_{k=l}^n \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{j_{ik}+n-D-j_{sa}^{ik}+1}$$

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

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot$$

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

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

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

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

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

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

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq i l \wedge l_i \leq D + s - n \wedge$$

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

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

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

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

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

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n) \wedge$$

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

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

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

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

$$\mathbb{k} = z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=s+1)}^{(l_s+s-l)}$$

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

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

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



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

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

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

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

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

$$\sum_{k=0}^{(j_i - j_{ik} - 1)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=s+1)}$$

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_s + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{ik} + n_{is} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

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

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

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

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

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

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

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l_i \leq D + s - n \wedge$$

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

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

$$(D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{(j_i - l + 1)} \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(l_i - l + 1)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - l_s + 1)!} \cdot$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_{ik} - l_i - s)! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_s + j_{sa}^{ik} - l + 1}^{l_{ik} - l + 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(l_i - l + 1)}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\begin{aligned}
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_s = j_{ik} - j_{sa}^{ik} + 1}^{l_s - l} \binom{l_s - l}{j_s} \cdot \\
& \sum_{j_{ik} = j_{ik} + s - j_{sa}^{ik}}^{j_{ik} - l} \binom{j_{ik} - l}{j_{ik}} \cdot \\
& \sum_{n_i = n + k}^n \sum_{n_{is} = n + k - j_s + 1}^{(n_i - j_s + 1)} \binom{n_i - j_s + 1}{n_i} \cdot \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \sum_{n_s = n_{ik} + j_{ik} - j_i - k_2} \binom{n_s}{n_{ik}} \cdot \\
& \frac{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$j_s < n \wedge l \neq j_i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$fz^S j_s j_{ik} j_i = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{sa}^{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{s-l+1} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$(D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq i l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{sa}^{ik} - s)!}$$

$$\frac{(D - l_i)!}{(n - l_i - j_i - l_s - l)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{l-1} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$



$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{(j_s)}$$

$$\sum_{j_i=j_i+j_{sa}^{ik}}^{(j_i)}$$

$$\sum_{n_i=n+lk-j_s+1}^n$$

$$\sum_{n_s=n_{ik}+j_{ik}-j_i-l_{k_2}}^{(n_s)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_{k_1})!}{(n_{is} + n_{ik} + j_s + l_{k_1} + l_{k_1} - n_s - j_i - n - 2 \cdot l_{k_1} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$(D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz = \sum_{k=l}^{j_{ik} - j_{sa}^{ik} + 1} \sum_{(j_s=2)}^{(l_i - l + 1)} \sum_{i_k = l_{ik} + n - D}^{l_s + j_{sa}^{ik}} \sum_{(j_i = l_i + n - D)}^{(n_i - j_s + 1)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{s=2}^{(l_s - l + 1)}$$

$$\sum_{l_i = l_s - l + 1}^{l_s - l + 1} \sum_{(l_i + j_{sa}^{ik} - l_i - s = j_{ik} + s - j_{sa}^{ik})}$$

$$\sum_{n_i = l_s - l + 1}^{n_i} \sum_{(n_{is} = n + l_s - j_s + 1)}$$

$$\sum_{n_{is} = j_{ik} - l_{k_1}}^{n_{is} - j_{ik} - l_{k_1}} \sum_{(n_{ik} + j_{ik} - j_i - l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)}$$

$$\sum_{n+l_k}^{(n_i+l_k+1)} \sum_{(n_s=n+l_k+1)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - n_s - \dots - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_{ik} + \dots + j_{ik} + k_1 - n_s - j_i - \dots - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$(D \geq n < n \wedge l_i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n$$

$$l_i - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n \leq l_i \leq D + l_s + s - n - 1) \vee$$

$$(D < n \wedge l_i \neq l_s \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S j_s^{j_{ik}, j_i} \sum_{k=l}^{(l_i - D - s)} \sum_{j_{ik}=l_{ik}}^{(l_i - l + 1)} \sum_{n_i=n+\mathbb{k}}^{(n_i - j_s + 1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_{is} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\begin{aligned}
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)}^{(l_s - l + 1)} \\
& \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{l_{ik} - l + 1} \sum_{(j_{ik} = j_s - j_{sa}^{ik})}^{(l_i - l + 1)} \\
& \sum_{k=1}^n \sum_{(n_{is} = n_{ik} + 1)}^{(n_{ik} + 1)} \\
& \sum_{k=1}^{n_{is} + j_s - j_{ik} - 1} \sum_{(n_{ik} + j_{ik} - j_i - l_{ik})}^{(n_{ik} + j_{ik} - j_i - l_{ik})} \\
& \sum_{k=1}^{n_{ik} + k_2 - j_{ik} - 1} \sum_{(n_{ik} - j_i + 1)}^{(n_{ik} - j_i + 1)} \\
& \frac{(n_{is} - 1)!}{(n_{is} - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{ik} - 1)!}{(n_{is} + j_s - n_{ik} - j_{ik})!} \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} - \\
& \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)}^{(l_s - l + 1)}
\end{aligned}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_s-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - 2 \cdot l_{k_2})!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_{k_2} + j_{sa}^s)!} \cdot \frac{1}{(n_{is} + j_s - j_s - s)!} \cdot \frac{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}{(l_s - l_i)!} \cdot \frac{1}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$((D \geq n < n \wedge l \neq i, l \wedge l_i \leq D - n + 1) \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l_s \leq l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} - 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} \leq l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$\mathbf{s}: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge \mathbf{s} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{j_s=2}^{(l_s-l)} \sum_{j_i=0}^{(l_i-l+1)} \sum_{j_{ik}=0}^{(l_{ik}-l+1)} \sum_{j_{is}=0}^{(n_{is}+j_s-1)} \sum_{j_{ik}=0}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_1)} \sum_{j_{is}=0}^{(n_{is}+j_s-1)} \frac{(n_i - n_{is} - 1)!}{(j_i - j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n_{ik}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-1}^{( )} \sum_{(n_{is}=n_{ik}+j_{ik}-j_i)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - \dots - 2 \cdot \mathbb{k}_1)!}{(n_{is} + n_{ik} + \dots + j_{ik} + \mathbb{k}_1 - \dots - j_i - \dots - \mathbb{k}_1 - j_{sa}^s)!}$$

$$\frac{1}{(n_{is} + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l = l \wedge l_s \leq D - n - 1 \wedge$

$1 \leq j_s \leq j_{ik} + j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i \wedge j_{sa}^{ik} - s > l_{ik} \wedge$

$l_i \leq D + s - n \wedge$

$D > n < n \wedge l = \mathbb{k} \geq 0 \wedge$

$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s \in \{1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$

$s = 3 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$\begin{aligned}
 f_{zS} S_{j_s, j_{ik}, j_i} &= \sum_{k=1}^n \sum_{l=1}^{(j_s)} \\
 &\sum_{j_{ik}=j_{sa}^{lk}}^{(l_i - l + 1)} \sum_{j_i=1}^{(l_i - l + 1)} \\
 &\sum_{n_i=n+lk}^n \sum_{(n_{ik}=n+lk_2-j_{ik}+1)}^{(n_i-j_{ik}-lk_1+1)} \sum_{n_s=n_{ik}+j_{ik}-j_i-lk_2}^{(n_{ik}+j_{ik}-j_i-lk_1)} \\
 &\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - 1)!} \cdot \\
 &\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 &\frac{(n_i + j_{sa}^{lk} - l_{ik} - s)!}{(l_i + 1 - j_i - l_{ik})! \cdot (j_i - s)!} \cdot \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 &\sum_{k=1}^n \sum_{l=1}^{(j_s)} \\
 &\sum_{j_{ik}=j_{sa}^{lk}}^{(j_s)} \sum_{j_i=1}^{(j_s)} \\
 &\sum_{n_i=n+lk}^n \sum_{(n_{ik}=n_i-j_{ik}-lk_1+1)}^{(j_s)} \sum_{n_s=n_{ik}+j_{ik}-j_i-lk_2}^{(j_s)} \\
 &\frac{(n_i + n_{ik} + j_{ik} + lk_1 - n_s - j_i - s - 2 \cdot lk)!}{(n_i + n_{ik} + j_s + j_{ik} + lk_1 - n_s - j_i - n - 2 \cdot lk - j_{sa}^s)! \cdot (n - s)!} \cdot \\
 &\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
 \end{aligned}$$

$$D \geq n < n \wedge l = {}_i l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 & \sum_{k=i}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)} S_{j_s, j_{ik}, j_i} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_i-i+1)} \sum_{(j_i=s)}^{(l_i-i+1)} \\
 & \sum_{l_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_s=n-j_i+1}^{n_{ik}+j_{ik}-j_i-\mathbb{k}_2} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

$$\sum_{k=i}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_i=s)}^{(\cdot)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\cdot)} \sum_{n_s=n_{ik}+j_{ik}-j_i} \frac{(n_i + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s) \cdot (n - s)!} \cdot \frac{(D - l_i)}{(D + s - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = j_l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik}$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \bullet s = s + \mathbb{k}$$

$$\mathbb{k}_2 \cdot z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=1}^l \sum_{(j_s=1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\cdot)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_s=n-j_i+1}^{n_{ik}+j_{ik}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^n \sum_{l=0}^{(j_{ik} - j_{sa}^{ik})}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(j_{ik} - j_{sa}^{ik})} \sum_{(j_i=s)}$$

$$\sum_{n_i=0}^n \sum_{(n_{ik}=n_i - j_{ik} - k_1 + 1)} \sum_{n_s=n_{ik} + j_{ik} - j_i - k_2}$$

$$\frac{(n_i + n_{ik} + j_{ik} + k_1 - 1)! \cdot (n_s - j_i - n - 2 \cdot k - j_{sa}^s)! \cdot (n - s)!}{(n_i + n_{ik} + j_s + j_{ik} + k_1 - 1)! \cdot (n_s - j_i - n - 2 \cdot k - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$(D \geq n < n \wedge l = l_i \wedge l_i \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n) \vee$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l = l_i \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n) \vee$$

$$(D \geq n < n \wedge l = l_i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{k=1}^{(j_s, j_{ik}, j_i)} \sum_{l=1}^{(j_s=1)} \sum_{j_{ik}=j_{sa}^{ik}}^{(l_i - l + 1)} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_s=n-j_i+1}^{n_{ik} + j_{ik} - j_i - \mathbb{k}_2} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{(j_i=)}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n_i-j_{ik}-l_1+1)}^{(\cdot)} \sum_{(n_s=n_{ik}-j_i-l_2)}$$

$$\frac{(n_i + n_{ik} + j_{ik} + l_1 - n_s - j_i - s - l_1)!}{(n_i + n_{ik} + j_s + j_{ik} + l_1 - n_s - j_i - n - l_1 - j_{sa}^s)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} > l_{ik}$$

$$D \geq n < n \wedge l = l_1 \geq 0$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, j_{sa}^{ik}, j_{sa}^{ik}, j_{sa}^{ik}\}$$

$$s = 3 \wedge s = s + 1 \wedge$$

$$l_2: 2 \wedge l_2 = l_1 + 1 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_{ik}+s-l-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{is}=n+l-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + 1 - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
& \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=l_{ik}+s-l-j_{sa}^{ik}+2)}^{(l_i-l+1)} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_i = l_i + j_{sa}^{lk} - s}^{(j_i + j_{sa}^{lk} - l_{ik} - s)} \sum_{j_i = l_i + n - D}^{(l_{ik} + s - l - j_{sa}^{lk} + 1)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(j_i + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!} \\
& \frac{(n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}{(n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{lk} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{j_s} \sum_{(j_s=j_{ik})}^{l_{ik}} l_{ik}$$

$$\sum_{j_{ik}+n+j_{sa}^{ik}}^{j_i+j_{sa}^{ik}} \sum_{(l_s+s-l)}^{(l_s+s-l)} \sum_{(n-D)}^{(n-D)}$$

$$\sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_i=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\begin{aligned}
 & \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \\
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_s+s-l+ )}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2- }^{n_{is}+j_s-j_{ik}} \sum_{(n_{i_2}=n+k_2- )}^{(n_{i_2}+j_{ik}-l_{i_2})} \\
 & \frac{(n_i - n_{i_2} - 1)!}{(j_s - 2)! \cdot (n_{i_2} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_i - n_s - 1)!}{(n_{i_2} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+n-D)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 2 \wedge s = s + \mathbb{k}$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$fzS_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{\binom{()}{j_i=l_i+n-D}}^{(l_i-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{is}=n+\mathbb{k}-j_s+1}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n-j_i+1}}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_i - s)!}{(j_{ik} + l_i - l - s)! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \\
& \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_{ik} - l + 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(l_i - l + 1)} \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{j_s=j_{ik}-l_{ik}}^{( )}$$

$$\sum_{l_i+n+j_{sa}^{ik}-D}^{l_{ik}+1} \sum_{j_i=j_{ik}+s-j_{sa}^{ik}}^{( )}$$

$$\sum_{n_{is}+k}^{(j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{( )}$$

$$\sum_{k=n_{is}+j_{sa}^{ik}-k-k_1}^{( )} \sum_{(n_s=n_{ik}+j_{ik}-j_i-k_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + k + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_i + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge I = k \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\frac{\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-s-1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j_i=n-D)}^{(l_i-l+1)} \sum_{(n_i=n+k)}^{(n_i-j_s)} \sum_{(n_i=n+k-j_s+1)}^{(n_i-j_s)} \sum_{(n_s=n+k_2-j_s-1)}^{(n_i-j_{ik}-k_1)} \sum_{(n_s=n-j_i+1)}^{(j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

GÜLDÜNYA

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{(n_{ik}+j_{ik}-j_i-l_{k_1})} \\
 & \frac{(n_i-1)!}{(j_s-2)! (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_s-n_{ik}-1)!}{(j_i-n_{ik}-1)! (n_{ik}+j_{ik}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_i+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{\binom{()}{}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{\binom{()}{}}
 \end{aligned}$$

GÜLDÜZMAYA



$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_i+n-D-s)} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_i + j_{sa}^{ik} - l_s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - l_s)!} \cdot$$

$$\frac{(l_i - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=0}^{(l_i - l_s) + 2}$$

$$\sum_{i=l_i + n - D - s + 1}^{\infty}$$

$$\sum_{k=j_s + l_{ik} - l_s}^{(l_i - l + 1)} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{(j_s = l_i + n - D - s + 1)}$$

$$\sum_{j_{ik} = l_i + l_{ik} - l_s} \sum_{(j_{sa}^{ik})}$$

$$\sum_{l_{ik} = n_{is} + l_{ik} - l_s} \sum_{(n_{ik} + j_{ik} - j_i - l_{k_2})}$$

$$\sum_{n_{ik} = n_{is} + j_{ik} - l_{k_1}} \sum_{(n_{ik} + j_{ik} - j_i - l_{k_2})}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_{ik} - j_i - s - 2 \cdot l_{k_2})!}{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_{ik} - j_i - n - 2 \cdot l_{k_2} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - l_i + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - l_{k_1} + l_{k_2} \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - l_{k_1} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_{k_1} = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = l_{k_1} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + l_{k_1} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=l_s+n-D)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=0}^n \sum_{(n_i=n+j_s+1)}^{(n-j_s+1)}$$

$$\sum_{(n_{is}+j_s=\mathbb{k}_1)}^{(n_{ik}+j_{ik}=\mathbb{k}_2)} \sum_{(n_{is}-j_{ik}+1)}^{(n_{is}+j_s-n_{ik}-j_{ik})}$$

$$\frac{(n_i - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

GÜLDÜMÜŞA

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_s - j_{sa}^i)!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^i - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^i - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{( )} \sum_{(j_i=j_{ik}+s-j_{sa}^i)}^{( )} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{( )} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^i)!} \cdot
 \end{aligned}$$

GÜLDÜSÜZ

$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$f_z \mathcal{S}_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)} \sum_{j_{ik} = l_{ik} + n - D}^{l_{ik} - l + 1} \sum_{(j_i = l_i + n - D)}^{(l_i - l + 1)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_i = l_i + j_{sa}^{lk} - s}^{(j_i + j_{sa}^{lk} - l_{ik} - s)} \sum_{(j_i = l_i + n - D)}^{(l_{ik} + s - l - j_{sa}^{lk} + 1)} \\
& \sum_{n_i = n + lk}^n \sum_{(n_s = n + lk - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - lk_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - lk_2)}^{(n_i - j_s + 1)} \\
& \frac{(n_{ik} + n_{ik} + j_{ik} + lk_1 - n_s - j_i - s - 2 \cdot lk)!}{(n_{ik} + j_s + j_{ik} + lk_1 - n_s - j_i - n - 2 \cdot lk - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{lk} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{l_s+l_{ik}-l+1} \sum_{j_{ik}=l_s+l_{ik}-D-1}^{j_{ik}-D-1} \sum_{j_i=l_i+n-D}^{j_i+l+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{(n_i-n_{is}-1)!} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$



$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\ )}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-)} \sum_{(=l_i+n-D)}^{(l_s+s-)}$$

$$\sum_{(=n+k)}^{(n)} \sum_{(n_{is}=n)}^{(n_{is}+1)}$$

$$\sum^{(\ )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} - k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n < n \wedge l_i > D - n - 1 \wedge$$

$$D + j_i + s - n - l_i - 1 \leq l \leq D - n + 1 \wedge$$

$$j_s \leq j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j_i + j_{sa}^{ik} \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge I = k \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned}
 f_{z^S} S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-l-j_{sa}^{ik}+2)} \\
 &\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=l_i+n)}^{(l_i-l+1)} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n-k-j_s+1)}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n+k_2-j_{ik}+1}^{(n_i+j_s-j_{ik}-n_{is}+j_{ik}-k_2)} \sum_{(n_s=n-j_i+1)}^{(n_i-j_s+1)} \\
 &\frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \\
 &\frac{(n_i-n_s-1)!}{(n_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 &\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \\
 &\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \\
 &\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-l-j_{sa}^{ik}+2)} \\
 &\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(\quad)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - 1)!}$$

$$\frac{(D - 1)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$

$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, j_{sa}^i\} \wedge$

$s = s \wedge s = s + \mathbb{k} \wedge$

$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
& \frac{\sum_{n_{ik}=\mathbf{n}+\mathbf{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbf{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbf{k}_2)} (n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (\mathbf{n} - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} + \\
& \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(l_s-l+1)} \\
& \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_i-l+1)} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
& \sum_{n_i=\mathbf{n}+\mathbf{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbf{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \frac{\sum_{n_{ik}=\mathbf{n}+\mathbf{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbf{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbf{k}_2)} (n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{(j_{sa}^{ik} - j_{sa}^{ik} + 1)} \sum_{j_s = j_s}^{(l_s + s - l)} \\
& \sum_{i_{ik} = j_i + l_{ik} - l_i}^{(j_i - j_s + 1)} \sum_{(j_i = l_i + n - D)}^{(n_i - j_s + 1)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(j_i - j_s + 1)} \\
& \frac{(n_s + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_s + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_i, j_i} = \sum_{k=l}^{(j_s - j_{sa}^{ik} + 1)} \sum_{j_{ik}=l_{ik} + j_{sa}^{ik} - D}^{l_s + j_{sa}^{ik} - l} \sum_{n_i=n+k}^{(n_i - j_s + 1)} \sum_{n_{is}=n+k_1}^{(n_{is} + j_s - n_{ik} - j_{ik})} \sum_{n_{ik}=n+k_2 - j_{ik} + 1}^{(n_{ik} + j_{ik} - j_i - k_2)} \sum_{n_s=n - j_i + 1}^{(n_i - n_{is} - 1)!} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\begin{aligned}
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-l-s+1}^{l_s+j_{sa}^{ik}-l-s+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-1}^{n_{is}+j_s-j_{ik}} \sum_{(n_s=n-j_i+j_{ik}-k_2)}^{(n_i+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_s+j_{sa}^{lk}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{(\quad)}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - \dots)!} \frac{(l_s - l - \dots)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(D - \dots)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = ? \quad s = s + \mathbb{k}_1$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k}_1 + \mathbb{k}_2 = \dots$$

$$fz_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{\binom{(\quad)}{j_i=j_{ik}+l_i-l_{ik}}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)}^{(l_s - l + 1)} \\
& \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{l_i + j_{sa}^{ik} - l - s + 1} \sum_{(j_i = j_{ik} + l_i - l_{ik})}^{( )} \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=0}^{(n-l+1)} \binom{n-l+1}{k} \binom{n-l+1}{n-s+1} \\
& \sum_{j_{ik}=j_s+j_{sa}^{ik}} \binom{n-l+1}{j_{ik}} \binom{n-l+1}{j_i=j_{ik}+l_i-l_{ik}} \\
& \sum_{j_s=0}^{j_s+1} \binom{n-l+1}{j_s} \binom{n-l+1}{n-l+1-k} \\
& \sum_{n_{is}=n+l_k} \binom{n-l+1}{n_{is}} \binom{n-l+1}{n+l_k-j_s+1} \\
& \sum_{n_{is}=n_{is}+j_s+l_k-l_{k_1}} \binom{n-l+1}{n_{is}} \binom{n-l+1}{n_{is}=n_{ik}+j_{ik}-j_i-l_{k_2}} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + l_k + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_i + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l}^{(l_s-l)} \sum_{(j_s=l_s+n-D)}^{(l_s-l)}$$

$$\sum_{(j_s=l_s+n-D)}^{(n_i-j_s)} \sum_{(n_i=n+l_s)}^{(n+l_s-j_s+1)}$$

$$\sum_{(n_i=n+l_s)}^{(n_i-j_s)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=l_s+s-l+1)}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2}+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_1})} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_s-n_{ik}+1)!}{(j_i-1)!(n_{ik}+j_{ik}-n_s-j_i)!} \cdot \frac{(n_s-j_i-n-1)! \cdot (n-j_i)!}{(n-1)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \sum_{k=l}^{\binom{)}{}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{\binom{)}{}} \\
 & \sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}^{(l_s+s-l)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{\binom{)}{}}
 \end{aligned}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - D)} \sum_{j_{ik} = l_{ik} + n - D}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + l_i - l_{ik})}^{()} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - j_s - 1)! \cdot (j_{ik} - j_s - l_s - 1)!}$$

$$\frac{(l_s - l_i)!}{(n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{l+1} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{l_s+j_s^k=l+1}^{-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_k-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_k} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_k)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = l_{ik} + n - D}^{l_s + j_{sa}^{ik} - l} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{(n_i - j_s + 1)} \sum_{(n_i - j_s + 1 + k_1 + k_2 - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} - j_{ik} - k_1} \sum_{(n_{ik} + j_{ik} - j_i - k_2)}$$

$$\frac{(n_{is} + n_{ik} - j_{ik} + k_1 - n_i - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} - j_{ik} + k_1 - n_i - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n \wedge l_s > D - 1 + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + k \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_{ik}+n-D-j_{s_a}^{ik})} \sum_{(j_s=l_s+n-D)}^{(j_s+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(j_i+1)}$$

$$\sum_{n_i=n_s}^n \sum_{(n_i=n_s+j_s+1)}^{(n_i+j_s+1)}$$

$$\sum_{(n_{is}+j_s-j_{ik}+1)}^{(n_{is}+j_s-j_{ik}+1)} \sum_{(n_{ik}+j_{ik}-j_i)}^{(n_{ik}+j_{ik}-j_i)}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{s_a}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{s_a}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{s_a}^{ik}+1)}^{(j_s+1)}$$

$$\sum_{j_{ik}=j_s+j_{s_a}^{ik}-1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(j_i+1)}$$

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$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_s - j_{ik})!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(n_{is} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(n_i-j_s+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\quad)} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\quad)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{(\quad)} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{(\quad)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot
 \end{aligned}$$

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$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)} \sum_{j_{ik} = j_i + l_{ik} - l_i}^{(l_i - l + 1)} \sum_{(j_i = l_i + n - D)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{i=0}^{(j_s - l)} \sum_{k=0}^{(j_{sa}^{ik} + 1)} \\
& \sum_{i_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_i+n-D)}^{(n)} \\
& \sum_{n_i=n+l_k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+l_k-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}}^{(n)} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k2})}^{(n)} \\
& \frac{(n_s + n_{ik} + j_{ik} + l_{k1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_s + n_{ik} + j_s + j_{ik} + l_{k1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}} = \sum_{l=1}^n \sum_{(j_s=l_s+n-D)}^{(1)} \sum_{(j_i=l_i+n+j_s-D-s)}^{(j_i=j_{ik}+l_i-l_{ik})} \sum_{(n_i=n+\mathbb{k})}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\ )}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_k+1)}^{(n_i+l_k+1)}$$

$$\sum_{j_{ik}=n_{is}+j_{ik}-l_{k_1}}^{(\ )} \sum_{(j_i=l_{k_2})}^{(\ )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - l_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_i - s - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = D - n - 1 \wedge$$

$$D + j_i + s - n - l_i - 1 \leq l \leq n - n + 1 \wedge$$

$$l \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j_i \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_i > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$j_{sa}^{ik} \geq n - l_i \wedge I = l_k \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + l_k \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{\mathcal{S}_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}^{(l_{ik}+s-l-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+l_{ik}-j_{sa}^{ik}}^n \sum_{(n+l_{ik}-j_{sa}^{ik})}^{(n+l_{ik}-j_{sa}^{ik})}$$

$$\sum_{(n_{is}+j_s-j_{sa}^{ik})}^{(n_{is}+j_s-j_{sa}^{ik})} \sum_{(n_{ik}+j_{ik}-n_{is})}^{(n_{ik}+j_{ik}-n_{is})}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik})!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}^{(l_s+s-l)}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$

$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, j_{sa}^i\} \wedge$

$s = s \wedge s = s + \mathbb{k} \wedge$

$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\quad)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + \mathbf{n} - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=l_{ik}+\mathbf{n}-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=\mathbf{n}_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot$$

$$\frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\ )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\ )} \sum_{j_{ik} = j_{sa}^{ik} + 1}^{j_i + j_{sa}^{ik} - s} \sum_{(j_i = s + 1)}^{(l_{ik} + s - l - j_{sa}^{ik} + 1)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$



$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\ )}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{lk}-s}^{(l_{ik}+s-l-j_{sa}^{lk})} \sum_{(s+1)}^{(n_i+1)}$$

$$\sum_{n+l}^{(n_i+1)} \sum_{(n_i+1)}^{(n_i+1)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} - l_{ik} - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \leq l \wedge l_s \leq D - n - 2 \wedge$$

$$1 \leq j_{ik} - j_{sa}^{lk} + j_s + j_{sa} - 1 \leq j_{ik} \leq j_i + j_{sa}^{lk} - s \wedge$$

$$j_{ik} + s - j_{sa}^{lk} \leq j_i \leq n$$

$$l_{ik} - \mathbb{k} + 1 = l_s - l + j_{sa}^{lk} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$j_s \geq n - l \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{lk} = j_{sa}^l - 1 \wedge j_{sa}^s = j_{sa}^{lk} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{lk}, \mathbb{k}_2, j_{sa}^l\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_Z S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=s+l)}^{(l_s+s-l)}$$

$$\sum_{n_i=n_i}^n \sum_{(j_s+1)}^{(j_s+1)}$$

$$\sum_{n_{is}+j_s-j_{ik}}^{n_{ik}+j_{ik}-j_i} \sum_{(j_{ik}+1)}^{(n-j_i+1)}$$

$$\frac{(n_i - n_{is})}{(j_s - 2) \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1) \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_s - j_{ik})!}$$

$$\frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=s+1)}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

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$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik} - l + 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(l_i - l + 1)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_i - l + 1} \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_i - l + 1} \sum_{n_i=n+l_k}^n \sum_{(n_s=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )} \frac{(n_{ik} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_{k_1})!}{(n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_{k_1} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{j_s} \sum_{j_i=j_{ik}+l_i-l_{ik}}^{j_i} \sum_{j_{ik}=j_{ik}+1}^{j_{ik}} \sum_{j_{sa}^i=j_{sa}^{ik}+1}^{j_{sa}^i} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{n_i-j_s+1} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_s=n-j_i+1}^{n_{ik}+j_{ik}-j_i-k_2} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$



$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\ )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n_{ik}+1)}^{(n_{is}+1)}$$

$$\sum_{(n_{ik}=n_{is}+1)}^{(\ )} \sum_{(j_i=j_{ik}-k_2)}^{(\ )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} - k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq l \wedge l_s \leq D - n - 2 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^s - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s - l + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$j_s \geq n - l_i \wedge I = k \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + k \wedge$$

$$\mathbb{k}_Z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=2)}^{(l_i-l+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(n-j_s+1)}$$

$$\sum_{n_i=n+1}^{n} \sum_{(n_i+j_s+1)}^{(n+j_s+1)}$$

$$\sum_{i_{ik}=1}^{n_i+j_s-j_{sa}^{ik}} \sum_{(n_{ik}+j_{ik}-n_s)}^{(n_{ik}+j_{ik}-n_s)}$$

$$\frac{(n_i - n_{is})}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=2)}^{(l_i-l+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(n-j_s+1)}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_k)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$l_i \leq D + s - n \wedge$

$D \geq n < n \wedge l = l_k = 0 \wedge$

$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge$

$s: \{j_s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i\}$

$s = 3 \wedge s = s + l_k \wedge$

$l_{k_2}: z = 2 \wedge l_k = l_{k_2} \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l} \sum_{(j_s=2)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

$$\begin{aligned}
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_s - j_{sa}^i)!} \cdot \\
 & \frac{(n_s - j_i - n - j_{sa}^i - l - 1)!}{(n_s - j_i - n - j_{sa}^i - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^i - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^i - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = 2)} \\
 & \sum_{j_{ik} = j_s + l_{ik} - l_s} \sum_{(j_i = j_{ik} + s - j_{sa}^i)}^{(\quad)} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(\quad)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^i)!} \cdot
 \end{aligned}$$

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$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\ )} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \sum_{j_{ik} = j_{sa}^{ik} + 1}^{j_i + j_{sa}^{ik} - s} \sum_{(j_i = l_i + n - D)}^{(l_{ik} + s - l - j_{sa}^{ik} + 1)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_i + j_{sa}^{ik} - l_i - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - s)!} \cdot$$

$$\frac{(l_i - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{j_s=j_{ik}+l_s-l_{ik}}^n$$

$$\sum_{j_{sa}^{ik}=1}^{l_i+1} \sum_{j_i=l_{ik}+s-l-j_{sa}^{ik}+2}^{(l_i-l+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\ )} \frac{(l_{ik}+s-j_{sa}^{ik}+1)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(n_i-j_s+1)!}{(n_i+l_{ik}+j_{ik}-j_i-l_{k_2})!} \cdot \frac{(n_{is}+n_{ik}-j_{ik}+l_{k_1}-n_i-j_i-s-2 \cdot l_{k_2})!}{(n_{is}+n_{ik}-j_{ik}+l_{k_1}-n_i-j_i-n-2 \cdot l_{k_2}-j_{sa}^s)!} \cdot \frac{1}{(n+j_{sa}^s-j_s-s)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l \neq l_i \wedge l \leq D - n + 1 \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{ik} + s - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = l_{k_2} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j_{s_a}^{ik}+1}^{j_i+j_{s_a}^{ik}-s} \sum_{(j_i=n-D)}^{(l_s+s-l)}$$

$$\frac{(n_{i_s}+k)(n_{i_s}+n+k-j_s)}{(n_{i_s}-j_s+1) \cdot (n_{i_s}-j_s+1)}$$

$$\frac{(n_{i_s}-n_{i_s}-1)!}{(j_s-2)! \cdot (n_{i_s}-j_s+1)!}$$

$$\frac{(n_{i_s}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{i_s}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_s-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{s_a}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{s_a}^{ik}-j_{ik}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j_{s_a}^{ik}+1}^{l_s+j_{s_a}^{ik}-l} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)}$$

GÜLDÜZÜMÜYA



$$\frac{\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_s - j_{ik})!} \cdot \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{\binom{(l_s+s-l)}{}} \sum_{(j_i=l_i+n-D)}^{\binom{(l_s+s-l)}{}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{\binom{()}{}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{\binom{()}{}}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

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$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)} \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_i + n + j_{sa}^{ik} - D - s - 1} \sum_{(j_i = l_i + n - D)}^{(l_i - l + 1)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - n_s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - n_s)!}$$

$$\frac{(n - l_i)!}{(n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{l=1}^{\infty} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{l=1}^{l+1} \sum_{(l_i - l + 1)} \sum_{(n + j_{sa}^{ik} - D - s)} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}$$

$$\sum_{n_i = n + k_1}^n \sum_{(n_{is} = n + k_1 - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{n+l}^{(n-j_s+1)} \sum_{(n+l-k-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}-j_{ik}-k_1} \sum_{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_{is} + n_{ik} - j_{ik} + k_1 - n - j_i - s - 2 \cdot k)!}{(n_{is} + j_s + j_{sa}^{ik} + k_1 - n - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n \wedge l \neq i \wedge l \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - l_{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_s = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{ik} + s - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge I = k \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$s = 3 \wedge s = s + k \wedge$

$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$

$$\begin{aligned}
 f_z S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \\
 &\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j_i=l_i+l-1)}^{(l_i-l+1)} \\
 &\sum_{n_{ik}=n_{is}-j_{ik}+1}^{(n_{is}+k)} \sum_{(n_{is}=n+k-j_{ik})}^{(n_{is}+1)} \\
 &\sum_{(j_i=j_s-1)}^{(j_s-j_{ik}-k_1)} \sum_{(n_{ik}=n+j_{ik}-j_i-k_2)}^{(n_{is}+1)} \\
 &\frac{(n_{is}-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \cdot \\
 &\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \\
 &\frac{(n_{ik}-n_s-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!} \cdot \\
 &\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 &\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 &\frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
 &\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 &\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \\
 &\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-l}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}
 \end{aligned}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_s - j_{ik})!}$$

$$\frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{ik} - l_{k_1} - s)!}{(j_{ik} + l_{k_1} - j_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{\binom{()}{j_i=j_{ik}+s-j_{sa}^{ik}}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-l_{k_2}}}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

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AYLA

$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_i + n - D - s)} \sum_{(j_s=2)}^{(l_i - l + 1)} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i - l + 1)} \sum_{(j_i=l_i+n-D)}^{(n_i - j_s + 1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i - j_s + 1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(l_i - l)!}{(D + j_i - n - l_i)! \cdot (j_i)!} + \\
& \sum_{k=1}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{p=s+1}^{(l_i - l + 1)} \\
& \sum_{j_i = j_s + l_{ik} - l_s}^{(l_i - l + 1)} \sum_{j_i = j_{ik} + s - j_{sa}^{ik}}^{(l_i - l + 1)} \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot
\end{aligned}$$



$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{(j_s = l_i + n - D - s + 1)}$$

$$\sum_{j_{ik} = j_s + l_{ik} - l_s}^{(j_s + l_{ik} - l_s - j_{sa}^{ik})} \sum_{(j_s + l_{ik} - l_s - j_{sa}^{ik})}^{(j_s + l_{ik} - l_s - j_{sa}^{ik})}$$

$$\sum_{n+l_k}^{(n_{is} + l_{ik} + 1)} \sum_{(n_{is} + l_{ik} + 1)}$$

$$\sum_{n_{ik} = n_{is} + l_{ik} - k_1}^{(n_{is} + l_{ik} - k_1 - j_i - k_2)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} - k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq l \wedge l_s \leq D - n - 2 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^s - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n$$

$$l_{ik} - k + 1 = l_s - l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n - l_i \leq D + l_{ik} + s - n - j_{sa}^{ik} \wedge$$

$$n - l_i \wedge l_i = k \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + k \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D-s)}^{(l_i-l+1)}$$

$$\sum_{n_i=0}^n \sum_{(n_i=j_s+1)}^{(n-j_s+1)}$$

$$\sum_{(n_{is}+j_s-\mathbb{k}_1)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{(n_{is}-j_{ik}+1)}^{(n-j_i+1)}$$

$$\frac{(n_i - j_s)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

GÜLDÜMÜŞA

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_s - j_{sa}^i)!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^i - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^i - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_i=j_{ik}+s-j_{sa}^i)}^{(\quad)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(\quad)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^i)!}
 \end{aligned}$$

GÜLDÜSÜZ

$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - l_i \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)} \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik} - l + 1} \sum_{(j_i = l_i + n - D)}^{(l_i - l + 1)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - n_s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - n_s)!}$$

$$\frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{l=1}^n \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$(l_{ik}+s-l-j_{sa}^{ik}+1)$$

$$\sum_{k=j_i+j_{sa}^{ik}-s}^n \sum_{(j_i=l_i+n-D)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq l_i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{ik} + s - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{j_{sa}^{ik}, j_{ik}, j_i} \sum_{l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{l_s+j_{sa}^{ik}-l}^{(l_i-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\begin{aligned}
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{( )} (j_s = j_i + l_s - l_{ik}) \\
& \sum_{j_{ik}=j_i+l_{ik}}^{( )} (j_i = l_i + n - D) \\
& \sum_{n_{is}=n+l_k}^{( )} (n_{is} = n + l_k - j_s + 1) \\
& \sum_{n_{is}=n_{ik}+j_{ik}-l_{k_1}}^{( )} (n_s = n_{ik} + j_{ik} - j_i - l_{k_2}) \\
& \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + l_k + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D > n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$





$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}^{(n_i-j_s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n_i-j_s+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_k}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{ik}-j_i)}^{(n_i-j_s+1)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - j_i - l_k - j_{sa}^s)!} \cdot \frac{1}{(j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq 1 \wedge l_s \leq D - n - 1 \wedge$$

$$1 < j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i - n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i - j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D - n - l_s \wedge I = l_k \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik}, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + l_k \wedge$$

$$l_{k_2}: z = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

$$\begin{aligned}
 f_{z^S} S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)} \\
 &\quad \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=s+l)}^{(l_s+s-l)} \\
 &\quad \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 &\quad \sum_{n_{ik}=n+l_{k_2}-j_{i_2}+1}^{(n_{is}+j_{ik}-j_{i_2}-l_{k_2})} \sum_{(n_s=n-j_i+l)}^{(n_{is}+j_{ik}-j_{i_2}-l_{k_2})} \\
 &\quad \frac{(n_i - n_{i_2} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \\
 &\quad \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik})!} \cdot \\
 &\quad \frac{(n_i - n_s - 1)!}{(n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 &\quad \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 &\quad \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 &\quad \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 &\quad \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\quad \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)} \\
 &\quad \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_i-l+1)} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
 &\quad \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\frac{\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_i)!} \cdot$$

$$\frac{(n_{ik}-n_s-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!} \cdot$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot$$

$$\frac{(l_s-1)!}{(j_s+l_i-1)! \cdot (j_s-2)!} \cdot$$

$$\frac{(l_{ik}-l_s+j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_i-l_s)! \cdot (j_s-j_s-j_{sa}^{ik}+1)!} \cdot$$

$$\frac{(D-l_i)!}{(D+n-l_i)! \cdot (n-j_i)!} \cdot$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=s+1)}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is}+n_{ik}+j_{ik}+l_{k_1}-n_s-j_i-s-2 \cdot l_k)!}{(n_{is}+n_{ik}+j_s+j_{ik}+l_{k_1}-n_s-j_i-n-2 \cdot l_k-j_{sa}^s)!} \cdot$$

$$\frac{1}{(n+j_{sa}^s-j_s-s)!} \cdot$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i - l)!}{(D + j_i - n - l_i)! \cdot (j_i - l)!} + \\
 & \sum_{k=1}^{l_i - l + 1} \sum_{j_s=2}^{(l_s - l + 1) - k} \sum_{j_i=j_{ik}+l_i-l_{ik}}^{l_i - k + 1} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\cdot)} \sum_{n+l_k}^n \sum_{(n_{is}=n+l_k+1)}^{(n_{is}+1)} \sum_{(j_{ik}=n_{is}+j_{ik}-l_{k_1})}^{(\cdot)} \sum_{(j_i=l_{k_2})}^{(\cdot)} \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l < l \wedge l_s \geq D - n \wedge$$

$$1 \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^s - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s - l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_i - n \wedge$$

$$n - l_i - l_k \wedge I = l_k \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + l_k \wedge$$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz \mathcal{S}_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n}^n \sum_{(n_i=n+j_s+1)}^{(n+j_s+1)}$$

$$\sum_{n_{is}+j_s-1}^{n_{ik}+j_{ik}} \sum_{(n_{ik}+j_{ik})}^{(n_{ik}+j_{ik})}$$

$$\sum_{(n_{ik}+j_{ik})}^{(n_{ik}+j_{ik})} \sum_{(n_{ik}+j_{ik})}^{(n_{ik}+j_{ik})}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

GÜLDENWA

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_k)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - 1)!}$$

$$\frac{(D - 1)!}{(D - j_i - n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_i \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge I = l_{k_1} = 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i\}$$

$$s = 3 \wedge s = s + l_k \wedge$$

$$l_{k_2}: z = 2 \wedge l_k = l_{k_2} \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)}$$



$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{i_s}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!}$$

$$\frac{(n_{i_s} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_s - j_{ik})!}$$

$$\frac{(n_s - j_i - n - l + 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(n_{ik} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{i_s}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!}$$

GÜLDÜMAYA

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - j_s - 1)! \cdot (j_{ik} - j_s - l_s + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{j_s=1}^{l_s} \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{l_s} \\
 & \sum_{j_{ik}=j_i+l_{ik}-l_i}^{l_s+s-l} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k2})}^{( )} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + l_{k1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz = \sum_{k=l}^{j_{ik} - j_{sa}^{ik} + 1} \sum_{(j_s=2)}^{(j_{ik} - j_{sa}^{ik} + 1)}$$

$$+ j_{sa}^{ik} - l \quad \sum_{(j_s=2)}^{(j_{ik} - j_{sa}^{ik} + 1)}$$

$$j_{ik} = l_i + j_{sa}^{ik} - D - s \quad (j_i = j_{ik} + l_i - l_{ik})$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_s + j_{sa}^{ik} - l + 1}^{l_i + j_{sa}^{ik} - l - s + 1} \sum_{(j_{ik} - j_s - j_{sa}^{ik} + 1)}$$

$$\sum_{(n_i - j_s + 1)} \sum_{(n_{ik} + l_k - j_s + 1)} \sum_{(n_{ik} - j_i - l_{k_2})} \sum_{(n_s = n - j_i + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{( )}$$

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$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{( )} \sum_{(n_s=n_{ik}+l_{k_2}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2})! \cdot 2 \cdot \dots \cdot (n - l + 1)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2})! \cdot (n - l + 1)! \cdot (j_s - s)!} \cdot \frac{1}{(n - l + 1 - j_s - s)!} \cdot \frac{(l_s - l + 1)! \cdot (j_s - 2)!}{(l_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq n + 1$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_{sa}^{ik} < n \wedge$$

$$l_i - j_{sa}^{ik} + l_{k_1} \geq l_s \wedge l_i - j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{k_1} < D + l_{k_2} - j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq l_{k_1} < n \wedge l = k_1 > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^{ik}, l_{k_2}, j_{sa}^s\} \wedge$$

$$s = 3 \wedge s = l_{k_2} + l_{k_1} \wedge$$

$$l_{k_2} \wedge k = k_1 + k_2 \Rightarrow$$

$$fz_{j_s, j_{ik}, j_i}^S = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-l-s+1} \binom{(\quad)}{\quad} \\
 & \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{\binom{n_i-1}{j_s-2} \binom{n_i-n_{is}}{n_{is}+j_s-1}!}{(j_{ik}-j_s-1)! \binom{n_{is}+j_s}{n_{ik}-j_{ik}}!} \\
 & \frac{\binom{n_{is}-n_{ik}}{n_{is}+j_s-n_{ik}-j_{ik}}!}{(j_i-n-1)! \binom{n_{ik}+j_{ik}-n_s-j_i}{n_s-j_i-n-1}!} \\
 & \frac{(n_s-j_i-n-1)! \cdot (n-j_i)!}{(l_s-l-1)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-j_s-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_i+j_{sa}^{ik}-l-s+1} \binom{(\quad)}{\quad} \\
 & \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)} \\
& \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1} \sum_{(j_i = j_{ik} + l_i - l_{ik})} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{(l_s + s - l)} \\ &\sum_{j_{ik} - j_i + l_{ik} - l_i}^{(l_s + s - l)} (j_i = l_{ik} + n + s - D - j_{sa}^{ik}) \\ &\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\ &\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ &\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\ &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$



$$\begin{aligned}
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{s=2}^{(l_s - l + 1)} \\
 & \sum_{i=j_i + l_{ik} - l_s}^{(l_{ik} + 1)} \sum_{i=l_s + s - l + 1}^{(l_{ik} + 1)} \\
 & \sum_{i=j_i + 1}^{(j_i + 1)} \\
 & \sum_{i=n + k}^{(n_{is} = n + k - j_s + 1)} \\
 & \sum_{i=n_{ik} - j_{ik} - k_1}^{(n_{ik} + j_{ik} - j_i - k_2)} \\
 & \sum_{i=n_{ik} - j_{ik} + 1}^{(n_s = n - j_i + 1)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_{ik}+n+s-D-j_{ik}^s)}^{(\cdot)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{ik}}^{(\cdot)} \sum_{(n_{ik}=n_{ik}+j_{ik}-j_i)}^{(\cdot)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_{ik} + \dots + l_{k1} - j_i - s - l_k - j_{sa}^s)!} \cdot \frac{1}{(j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq 1 \wedge l_s \leq D - n - 1 \wedge$$

$$1 < j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{ik} + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i - n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_s \leq D + l_i + s - n - 1 \wedge$$

$$D > n - n \wedge I = l_k \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \cdot \{j_{sa}^{ik-1}, j_{sa}^{ik}, l_{k2}, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + l_k \wedge$$

$$l_{kz}: z = 2 \wedge l_k = l_{k1} + l_{k2} \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{s_a}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{s_a}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik_2}+1}^{n_{is}+j_s-j_{ik_2}-j_{ik_2}+j_{ik_2}-l_{k_2}} \sum_{(n_s=n-j_i+l_i)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_s - n_s - 1)!}{(n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{s_a}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{s_a}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_s+j_{s_a}^{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

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$$\frac{\sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + \mathbf{n} - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=l_{ik}+\mathbf{n}-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=\mathbf{n}_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot$$

$$\frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_{z^S}^{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(l_{ik} + n - D - j_{sa}^{ik})} \sum_{(j_s=2)} \\ &\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{()} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\ &\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=0}^{l_s - l + 1} \sum_{l_{ik} = l_{ik} + n - D - j_{sa}^{lk}} \binom{l_s - l + 1}{k} \binom{n - j_i}{n - l_{ik} - l_i - l_{ik}} \\
 & \sum_{n_i = n + l_k}^{n_i - j_s + 1} \sum_{n_{is} = n + l_k - j_s + 1}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + l_{k_2} - j_{ik} - l_{k_1}}^{n_{ik} + j_{ik} - j_i - l_{k_2}} \sum_{n_s = n - j_i + 1}^{(n_{ik} + j_{ik} - j_i - l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j_i=j_{ik}+l_i-l)}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n-k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k}^{( )} \sum_{(n_{ik}+j_{ik}-j_i)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + \dots + j_{ik} + k_1 - \dots - j_i - \dots - k - j_{sa}^s)!}$$

$$\frac{1}{+ j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq 1 \wedge l_s \leq D - n - 1 \wedge$$

$$D + l_s + s - \dots - l_i + \dots \leq l \leq l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} - 1 \wedge j_s + \dots \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - \dots \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_s \wedge l_{ik} - j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D - \dots < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

$$j_{sa}^s - j_{sa}^s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned}
 f_{zS}^{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)} \\
 &\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \\
 &\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n+l_{k_2}+1}^{n_{is}+j_s-j_{ik}} \sum_{(n_{ik}+j_{ik}-n_i-l_{k_2})}^{(n_{ik}+j_{ik}-n_i-l_{k_2})} \\
 &\frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{ik}-j_s+1)!} \\
 &\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{ik}+j_s-n_{ik}-j_{ik})!} \\
 &\frac{(n_{ik}-n_s-1)!}{(n_{ik}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!} \\
 &\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 &\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 &\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 &\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \\
 &\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
 &\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)} \\
 &\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - 1 > l_s \wedge$

$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_i + j_{sa}^{ik} - n - 1$

$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$

$j_{sa}^{ik} = i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, j_{sa}^i\} \wedge$

$s = 1 \wedge s = s + \mathbb{k} \wedge$

$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=2)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{\binom{()}{j_i=j_{ik}+l_i-l_{ik}}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + \mathbf{n} - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=l_i+\mathbf{n}+j_{sa}^{lk}-D-s}^{l_s+j_{sa}^{lk}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\ )}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(\ )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot$$

$$\frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i \wedge l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_s - l + 1)} \sum_{j_s=2}^{(j_s - 2)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_{ik}=j_{ik}-l_i}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{j_i=l_{ik}+n+s-D-j_{sa}^{ik}}^{(l_s+s-l)} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_s=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{(n_i-j_s+1)} \\
& \frac{(n_{ik} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_{k_1})!}{(n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_{k_1} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{(j_s=2)}^{(l_s-l)} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(j_i-j_{ik}, j_i)} \sum_{(n_i=n+\mathbb{k})}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )} \sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_{ik}+l_i-l_{ik})}^{(\ )} \sum_{(n+l_k)}^{(n_i+l_k+1)} \sum_{(n_{is}=n_i+l_k+1)}^{(\ )} \frac{(n_{is} + n_{ik} + j_{ik} - l_{ik_1} - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_{ik} \leq l \wedge l_s \leq D - n - 2 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^s - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n - l_{ik}$$

$$l_{ik} - l_k + 1 > l_s - l + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_i - n \wedge$$

$$j_s \geq n - l_{ik} \wedge I = k \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + k \wedge$$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz^{\mathcal{S}_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_i-l_{i+1})}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(n_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i+n_{ik}-1)!}{(j_i-2)! \cdot (n_i+n_{ik}-j_{ik}+1)!}$$

$$\frac{(n_{ik}-j_i-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-s-j_i)!}$$

$$\frac{(n_s-j_i-n-1)! \cdot (n-j_i)!}{(l_i-l_s-j_{sa}^{ik}+1)! \cdot (j_{ik}-j_{sa}^{ik})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{(j_i=s)}^{(\cdot)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\cdot)} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i+n_{ik}+j_{ik}+\mathbb{k}_1-n_s-j_i-s-2 \cdot \mathbb{k})!}{(n_i+n_{ik}+j_s+j_{ik}+\mathbb{k}_1-n_s-j_i-n-2 \cdot \mathbb{k}-j_{sa}^s)! \cdot (n-s)!}$$

$$\frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}$$

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$$D \geq n < n \wedge l = {}_i l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s = 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, \dots, j_i} = \sum_{k={}_i l}^{()} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{i l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_s=n-j_i+1}^{n_{ik}+j_{ik}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{(j_i=)}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{(\cdot)} \sum_{(n_s=n_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_i + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - l_{k_2})!}{(n_i + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - l_{k_2} - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(n - l_i)!}{(n - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} > l_{ik}$$

$$D \geq n < n \wedge l = l_{k_1} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1} - j_{sa}^{ik}, l_{k_2}\} \wedge$$

$$s > 3 \wedge s = s + 1 \wedge$$

$$l_{k_2}: 2 \leq l_{k_2} \wedge l_{k_2} = l_{k_1} + 1 \Rightarrow$$

$$f_z^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_{ik}+s-l-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{is}=n+l-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \\
& \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=l_{ik}+s-l-j_{sa}^{ik}+2)}^{(l_i-l+1)} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_{ik} = l_i + j_{sa}^{ik} - s}^{(j_i - j_{ik} - 1)} \sum_{j_{sa}^{ik} = j_{ik} + 1}^{(j_i - j_{ik} - 1)} \\
& \sum_{j_i = n + \mathbb{k}}^n \sum_{(n_s = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1}^{(n_s + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(n_s + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s+s-l)} \binom{j_i + j_{sa}^{ik} - 1}{j_{ik} + n + j_{sa}^{ik} - D} \binom{(l_s+s-l)}{n-D} \binom{(n_i - j_s + 1)}{n_i = n + k} \binom{(n_i - n + k - j_s + 1)}{(n_{is} = n + k - j_s + 1)} \binom{n_{is} + j_{ik} - k_1}{n_{ik} = n + k_2 - j_{ik} + 1} \binom{(n_{ik} + j_{ik} - j_i - k_2)}{(n_s = n - j_i + 1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\begin{aligned}
 & \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_s+s-l)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_i=n-k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}-1}^{\Delta} \sum_{(n_s=n-j_i+1)}^{\Delta} \\
 & \frac{(n_s - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{ik} + j_{ik} - j_s + 1)!} \\
 & \frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_s - n_s - 1)!}{(n_{ik} + j_{ik} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)}
 \end{aligned}$$

GÜLDÜNYA

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: (j_{sa}^s, \dots, \mathbb{k}_1, j_s, \mathbb{k}_2, j_{sa}^i)$$

$$s > 1 \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - n - 1)! \cdot (n - j_i)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(j_s - 1)! \cdot (l_s + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + 1 - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
& \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{(\cdot)} \\
& \sum_{j_{ik} = l_{ik} + j_{sa}^{ik} - D - s}^{l_{ik}} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(\cdot)} \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - k_2)}^{(\cdot)} \\
& \frac{(n_{ik} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$



$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{\mathbb{k}} \binom{l_i - l + 1}{j_s = j_{ik} + 1} \binom{l_i + n + j_{sa}^{ik} - D - 1}{j_{ik} + n + j_{sa}^{ik} - D} \binom{n_i - j_s + 1}{n_i = n + \mathbb{k}} \binom{n_i - n_{is} - 1}{n_{is} = n + \mathbb{k} - j_s + 1} \binom{n_{is} + j_{ik} - \mathbb{k}_1}{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1} \binom{n_{ik} + j_{ik} - j_i - \mathbb{k}_2}{n_s = n - j_i + 1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\begin{aligned}
 & \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}-l_{k_1}}^{\Delta} \sum_{(n_s=n-j_i+l_{k_1})}^{\Delta} \\
 & \frac{(n_s - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - j_s + 1)!} \\
 & \frac{(n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \\
 & \frac{(n_s - n_s - 1)!}{(n_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: (j_{sa}^s, \dots, \mathbb{k}_1, j_s, \mathbb{k}_2, j_{sa}^i)$

$s > 1 \wedge s = s + \mathbb{k} \wedge$

$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + \mathbf{n} - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)} \\
& \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}
\end{aligned}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=0}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{j_s = j_s + j_{sa}^{ik} - 1}^{(n - j_s + 1)} \sum_{n_i = n + k}^n \sum_{n_{is} = n + k - j_s + 1}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - k_2)}^{(n_i - j_s + 1)} \frac{(n_{ik} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \frac{(l_i - D - s)!}{\sum_{k=l}^{(j_s - D)} \sum_{j_{ik}=j_s + s}^{(l_i - l + 1)} \sum_{n_i=n+k}^{(n_i - j_s + 1)} \sum_{n_{ik}=n+k_2 - j_{ik} + 1}^{(n_{is} + j_{ik} - k_1)} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\begin{aligned}
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{ik}^{ik})}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{is}+j_s-j_{ik}}^{(n_i+j_{ik}-j_i-k_2)} \\
 & \sum_{n_{ik}=n+k_2-1}^{(n_i-n_{ik}-k_1)} \sum_{(n_s=n-j_i)}^{(n_i-n_{ik}-k_1)} \\
 & \frac{(n_i-n_{ik}-k_1)!}{(j_s-2)! \cdot (n_{is}+j_s-j_{ik}-k_1)!} \\
 & \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-k_1)!} \\
 & \frac{(n_i-n_s-1)!}{(n_{ik}+j_{ik}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_s - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - 1 = l \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{j_i=l_i+n-D}^{(l_i-l+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{is}=n+\mathbb{k}-j_s+1}}^{(n_i-j_s+1)}$$



$$\frac{\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot$$

$$\frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}-n_s-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-1)!}{(l_s-j_s+l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{sa}-l_{ik}-s)!}{(j_{ik}+l_i-j_{sa}-l_{ik})! \cdot (l_i+j_{sa}^i-j_{ik}-s)!}$$

$$\frac{(D-l_i)!}{(D+l_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is}+n_{ik}+j_{ik}+l_{k_1}-n_s-j_i-s-2 \cdot l_{k_1})!}{(n_{is}+n_{ik}+j_s+j_{ik}+l_{k_1}-n_s-j_i-n-2 \cdot l_{k_1}-j_{sa}^s)!} \cdot$$

$$\frac{1}{(n+j_{sa}^s-j_s-s)!}$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = l_s + n + j_{sa}^{ik} - D - 1}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = l_i + n - D)}^{(l_i - l + 1)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$



$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_{ik})} \sum_{(j_s + n - D - j_{sa}^{ik} + 1)}^{(l_{ik})} \sum_{j_{ik} = j_{sa}^{ik} - 1}^{(l_{ik})} \sum_{(j_i = l_i + n - D)}^{(l_{ik})} \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{(j_s = l_i + n - D - s + 1)}$$

$$\sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{( )} \sum_{(j_i = j_s + s - j_{sa}^{ik})}^{( )}$$

$$\sum_{n+l}^{(n_i + 1)} \sum_{(n_{is} = n + l + 1)}$$

$$\sum_{( )}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + j_{sa}^{ik} - n_s - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n$$

$$l_{ik} - \mathbb{k} + 1 \geq j_s + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_z^S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{ik}+1)} \\
 &\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+n-1)}^{(l_s+s-l)} \\
 &\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 &\frac{(n_{is}+j_s-j_{ik}-1) \cdot (n_{is}+j_{ik}-n+l_k-1)}{(n_{ik}=n+l_k-1) \cdot (n_s=n-j_i+1)} \\
 &\frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}+j_s+1)!} \\
 &\frac{(n_{is}-n_{ik}-l_k-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_k-1)!} \\
 &\frac{(n_i-n_s-1)!}{(n_{ik}+j_{ik}-n_s-j_i)!} \\
 &\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 &\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 &\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 &\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 &\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \\
 &\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_i-l+1)} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
 &\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\frac{\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot$$

$$\frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}-n_s-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-1)!}{(j_s+l_i-1)! \cdot (j_s-2)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{sa}^{ik}-l_s)! \cdot (j_s-j_s-j_{sa}^{ik}+1)!}$$

$$\frac{(D-l_i)!}{(D+n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+n-D)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is}+n_{ik}+j_{ik}+l_{k_1}-n_s-j_i-s-2 \cdot l_{k_1})!}{(n_{is}+n_{ik}+j_s+j_{ik}+l_{k_1}-n_s-j_i-n-2 \cdot l_{k_1}-j_{sa}^s)!} \cdot$$

$$\frac{1}{(n+j_{sa}^s-j_s-s)!}$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_{j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$



$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s+1)} \sum_{(j_s=l_s+n-k)}^{(l_s+1)} \sum_{j_{ik}=j_{sa}^{ik}-l+1}^{(j_{ik}-l-s+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(n_i-j_s+1)} \\
 & \sum_{n_i=n+l_k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

GÜLDÜMÜN

$$\begin{aligned}
 & \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\cdot)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n_i-k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{(\cdot)} \sum_{(n_{ik}+j_{ik}-j_i-n)}^{(\cdot)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + j_{sa}^{ik} + j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} + k_1 - j_i - j_{sa}^{ik} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 < j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i - n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n = k >$$

$$j_{sa}^{ik} > j_{sa}^{ik} - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 0 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz_{j_s, j_{ik}, j_i}^S = \sum_{k=l}^{(\cdot)} \sum_{(j_s=l_s+n-D)}^{(l_i+n-D-s)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-l-s+1} \binom{(\quad)}{\quad} \\
 & \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_1)} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-k_1)!} \\
 & \frac{(n_i-n_s-1)!}{(j_i-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(n_i-j_s+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_i+j_{sa}^{ik}-l-s+1} \binom{(\quad)}{\quad} \\
 & \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)} \\
& \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z^{j_{sa}^{ik}, j_i} = \sum_{k=l}^{j_{ik} - j_{sa}^{ik} + 1} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{(l_s + s - l)}^{j_{ik} = j_i + j_{sa}^{ik} - s \quad (j_i = l_{ik} + n + s - D - j_{sa}^{ik})}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-l)}$$

$$(l_{ik} + s - j_{sa}^{ik} + 1)$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-s} \sum_{(j_s=l_s+n-l)}$$

$$(n_i - j_s + 1)$$

$$\sum_{(n_{ik} + l_k - j_s + 1)}$$

$$n_{is} + j_s - i_{ik} - l_{k_1} \quad (n_{ik} + j_i - l_{k_2})$$

$$\sum_{(n_{ik} + l_{k_2} - j_{ik})} \sum_{(n_s = n - j_i + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

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$$\sum_{j_{ik}=j_i+j_{sa}^{lk}-s} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{lk})}^{(l_s+s-l)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_i-j_{ik}-l_{k_2})}^{()}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - 2) \cdot \dots \cdot 1}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - n - 2) \cdot \dots \cdot (j_{sa}^k)!}$$

$$\frac{1}{(n_{is} + j_s - j_s - s)!}$$

$$\frac{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}{(l_s - j_s - l)!}$$

$$\frac{(j_s - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + \dots$   
 $2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} = j_i + j_{sa}^{ik} - s \wedge$   
 $j_{ik} + s - j_{sa}^{lk} \leq j_s \leq n \wedge$   
 $l_{ik} - j_{sa}^{lk} + \dots > l_s \wedge l_{ik} + j_{sa}^{lk} - s = l_{ik}$   
 $D \geq n < n \wedge l_s - l_{k_1} > 0 \wedge$   
 $j_{sa}^{lk} = j_i - 1 \wedge j_{sa}^s > j_{ik} - 1 \wedge$   
 $s: \{j_{sa}^s, \dots, j_{sa}^{lk}, l_{k_2}, j_s^i\} \wedge$   
 $s > \dots = s + l_k \wedge$   
 $l_{k_2}: z = 2 \wedge \dots = l_{k_1} + l_{k_2} \Rightarrow$

$$f^z S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{lk}+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{lk}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{lk})}^{()}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_{ik})!} \cdot \\
 & \frac{(n_s - j_i - n - l + 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_{ik} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
 \end{aligned}$$

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$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - l_s + 1)!}$$

$$\frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{s=1}^l \sum_{(j_s=j_{ik}-j_{s_a}^{ik}+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{+j_{s_a}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{s_a}^{ik})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{s_a}^s)!}$$

$$\frac{1}{(n + j_{s_a}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned} & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\ & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\ & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_{ik} + n - D - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{l_{ik} - l + 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}$$

$$\sum_{n + k}^n \sum_{(n_{is} = n + k + 1)}$$

$$\sum_{n_{ik} + k_2 - j_{ik}}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{ik} + j_{ik} - j_i - k_2)}$$

$$\frac{(n_{is} - k_1 - k_2 - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - k_1 - k_2 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_{ik} + n - D - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = j_s + j_{sa}^{ik} - 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + 1 \leq j_{ik} \leq j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_i \wedge l_i + j_{sa}^{ik} - s \leq l_{ik} \wedge$$

$$D \geq n \wedge l = \mathbb{k} = 0 \wedge$$

$$j_{sa}^i = j_{sa}^i - 1 \wedge j_{sa}^i > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_i\} \wedge$$

$$s > 3 \wedge j_s + s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z = 2 \wedge \mathbb{k} = \mathbb{k}_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)}$$

$$\frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(n_{is} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{\binom{()}{}}$$

$$\sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{\binom{()}{}}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{\binom{l_s+s-l}{}}$$

$$\sum_{(j_i=l_i+n-D)}^{\binom{l_s+s-l}{}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{\binom{()}{}}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

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$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = l_i + n + j_{sa}^{ik} - l - s + 1}^{( )} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=0}^{(l_s - l + 1)} \sum_{l_i = D - s + 1}^{(l_s - l + 1)} \sum_{j_s = j_s + j_{sa}^{ik} - 1}^{(j_s - l)} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_s = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{( )} \frac{(n_{ik} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}} = \sum_{l=1}^n \sum_{(j_s=l_s+n-D)}^{(l+s)} \sum_{(j_{sa}^{ik}+1)}^{(l+s-j_{sa}^{ik}+1)} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}^{(n)} \sum_{(n_i=n+\mathbb{k})}^{(n_i=n+\mathbb{k}-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \sum_{(n_s=n-j_i+1)}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$



$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_{ik}+j_{sa}^{ik}-D-j_{sa}^{ik})}$$

$$\sum_{n+l_k}^{(n_i+l_k+1)} \sum_{(n_{is}=n_i+l_k+1)}$$

$$\sum_{(n_{ik}=n_{is}+l_{ik}-l_{k_1})}^{(\ )} \sum_{(j_i=l_{k_2})}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = D - n - 1 \wedge$$

$$D + j_s + s - n - l_i - 1 \leq l \leq n - n + 1 \wedge$$

$$1 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j_i \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D > n < n \wedge I = l_k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + l_k \wedge$$

$$l_{k_2}: z = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

$$fz_{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = l_{ik} + n - D}^{l_{ik} - l + 1} \sum_{(j_i = j_{ik} + s - j_{ik}^{ik})}^{( )}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + k_2 - j_{ik}^{ik} + 1}^{n_{is} + j_s - j_{ik}^{ik}} \sum_{(n_s = n - j_i + k_2)}^{(n_{is} + j_{ik}^{ik} - k_2)}$$

$$\frac{(n_i - n_s - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_i - n_s - 1)!}{(n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{( )}$$

$$\sum_{j_{ik} = l_{ik} + n - D}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{\binom{(\cdot)}{n_s=n_{ik}+j_{ik}-j_i-k_2}} \frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - 1)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa}^{ik} = j_{sa}^l - 1 \wedge j_{sa}^s > j_{sa}^{ik} \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$

$s > 2 \wedge s = s + k$

$k_2 = 2 \wedge k = k_1 + k_2$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)} \\
 & \sum_{j_{ik} = l_{ik} + n - D}^{l_{ik} - l + 1} \sum_{(j_i = l_s + s - l + 1)}^{(l_i - l + 1)} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{(j_{ik} - j_s - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} (j_i=l_i+n-D)$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k2})}^{( )}$$

$$\frac{(n_s + n_{ik} + j_{ik} + l_{k1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{ik} + j_s + j_{ik} + l_{k1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

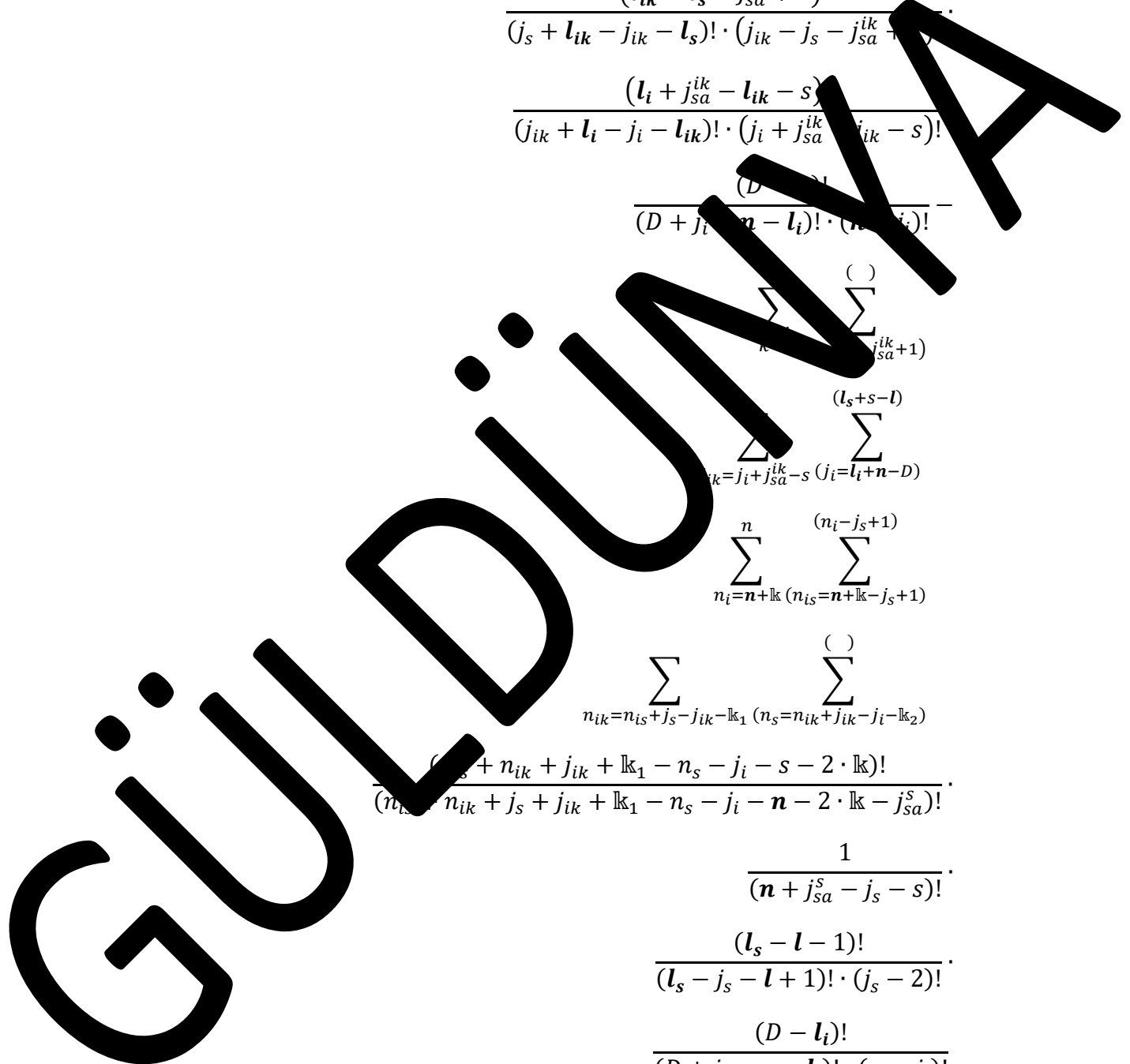
$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$



$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_i, j_i} = \sum_{k=l}^{(j_s - j_{sa}^{ik} + 1)} \sum_{j_{ik}=l_{ik}+1}^{(l_i - l + 1)} \sum_{n_i=n+k}^{(n_i - j_s + 1)} \sum_{n_{is}=n+k-j_s+1}^{(n_i + j_{ik} - k_1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{(n_{ik} + j_{ik} - j_i - k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = l_s + j_{sa}^{ik} - l + 1}^{l_{ik} - l + 1} \sum_{(j_{ik} + s - j_{sa}^{ik})}^{(l_i - l + 1)}$$

$$\sum_{n + k}^n \sum_{(n_{is} = n_{is} + 1)}$$

$$\frac{\sum_{(n_{ik} + j_{ik} - j_i - k_1)}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{ik} + j_{ik} - j_i - k_1)}^{(n_{ik} + j_{ik} - j_i - k_1)}}{\sum_{(n_{ik} + k_2 - j_{ik} - k_1)}^{(n_{ik} + k_2 - j_{ik} - k_1)} \sum_{(n_{ik} + k_2 - j_{ik} - k_1)}^{(n_{ik} + k_2 - j_{ik} - k_1)}} \cdot \frac{(n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - k_1 - k_1 - 1)!}{(j_{ik} - k_1 - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{( )}$$

GÜLDENWA





$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_{ik})!} \cdot \\
 & \frac{(n_s - j_i - n - l + 1)!}{(n_s - j_i - n - l - 1)!} \cdot \\
 & \frac{(n - j_s - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_{ik} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} - l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}
 \end{aligned}$$

GÜLDÜSÜZ

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)} \\
 & \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz \mathcal{S}_{j_{ik}, j_i} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = l_{ik} + n - D}^{l_{ik} - l + 1} \sum_{(j_i = l_i + n - D)}^{(l_i - l + 1)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\begin{aligned}
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_s=1}^{l_s-l} \sum_{j_{ik}=j_s-j_{sa}^{ik}+1}^{l_s-l} \sum_{j_i=l_i+n-D}^{l_s+l-j_{sa}^{ik}-s} \sum_{n_i=n+k}^n \sum_{n_s=n+k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{(n_s=n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$n_{ik} \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{j_s} \sum_{j_i=j_{ik}+1}^{j_i+j_{sa}^{ik}} \sum_{n_{ik}=j_{sa}^{ik}+1}^{n_{ik}+s-l-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

GÜLDÜNYA

$$\begin{aligned}
 & \sum_{k=l} \sum_{(j_s=j_{ik}-j_{s_a}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=j_{s_a}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=l_{ik}+s-l-j_{s_a}^{ik}+1)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{\Delta} \sum_{(n_s=n-j_i+1)}^{\Delta} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}+j_s-j_{ik}-l_{k_1}-1)!} \\
 & \frac{(n_{is}+j_s-j_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!} \\
 & \frac{(n_i-n_s-1)!}{(n_{ik}+j_{ik}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{s_a}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{s_a}^{ik}-j_{ik}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \\
 & \sum_{k=l} \sum_{(j_s=j_{ik}-j_{s_a}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=j_i+j_{s_a}^{ik}-s}^{(l_{ik}+s-l-j_{s_a}^{ik}+1)} \sum_{(j_i=s+1)}
 \end{aligned}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_1})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_{k_1})!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_{k_1} - j_{sa}^{i_s})!}$$

$$\frac{(j_{sa}^{i_s} - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$l_i \leq D + s - n \wedge$

$D \geq n < n \wedge l = l_{k_1} = 0 \wedge$

$j_{sa}^{i_s} = j_{sa}^i - 1 \wedge j_{sa}^{i_s} > j_{sa}^{ik} - 1 \wedge$

$s: \{j_s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, \dots, j_i\} \wedge$

$s > 3 \wedge s \leq s + l_{k_1} \wedge$

$l_{k_2}: z \leq 2 \wedge l_{k_2} = l_{k_2} \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=s+1)}^{(l_s+s-l)}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{ik} - l_{k_1} - s)!}{(j_{ik} + l_{k_1} - j_i - l_{k_1})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^j \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
 \end{aligned}$$

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$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - n_s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - n_s)!} \cdot \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \sum_{s=1}^n \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_s=j_{ik}-j_{sa}^{ik}+1} \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{l_s+s-l} \sum_{j_i=s+1}^{(l_s+s-l)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, \dots, j_i} = \sum_{k=l}^{( )} \binom{l_{ik}-l}{j_{sa}^{ik}+1} \binom{l_i-l+1}{j_i=j_{ik}+s-j_{sa}^{ik}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{( )} \sum_{(j_s = j_{sa}^{ik} + 1)}^{l_{ik} - l + 1} \sum_{(n_{ik} = n_{is} - j_{ik} - l_{k_1} + j_{ik} + j_{ik} - j_i - l_{k_2})}^{(n_i - j_s + 1)} \frac{(n_{is} + n_{ik} - j_{ik} + l_{k_1} - n_{ik} + j_{ik} - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} - j_{ik} + l_{k_1} - n_{ik} + j_{ik} - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l \leq D - n + 1 \wedge$$

$$1 \leq j_{ik} \leq j_{ik} - j_{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{ik} \leq j_i \leq n \wedge$$

$$l_i - j_{sa}^{ik} = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

$$\sum_{n_i=n_{ik}+\mathbb{k}}^{(n_i-l+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-l+1)}$$

$$\sum_{n_{ik}=n_{is}-j_{ik}+1}^{(n_{ik}-l_1)} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_2)}^{(n_{ik}-l_1)}$$

$$\frac{(n_{ik}-n_{is}-1)!}{(j_s-2)! \cdot (n_{ik}-n_{is}-j_s+1)!}$$

$$\frac{(n_{is}-n_{ik}-l_1-1)!}{(n_{ik}-n_{is}-j_s+1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_1)!}$$

$$\frac{(n_{ik}-n_s-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^{is})!}$$

$$\frac{(j_{sa}^{is} - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - 1)!}$$

$$\frac{(n - j_i)!}{(n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$l_i \leq D + s - n \wedge$

$D \geq n < n \wedge l = \mathbb{k} - 1 \wedge$

$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^{ik} > j_{sa}^{ik} - 1 \wedge$

$s: \{j_s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \dots, j_i\} \wedge$

$s > 3 \wedge s \leq s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_2 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=2)}^{(l_{ik}-l-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

$$\frac{\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_{ik})!} \cdot \frac{(n - j_i - n - j_i - l - 1)!}{(n_s - j_i - n - j_i - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{ik} - l_{k_1} - s)!}{(j_{ik} + l_{k_1} - j_i - l_{k_1})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} - \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=2)}^{(n)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(n)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(n_i-j_s+1)} \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 =$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i - l + 1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k_1=0}^{(l_s - l + 1) - j_s} \sum_{k_2=0}^{(n - j_s + 1) - n_i + k_1} \sum_{n_i = n + k_1}^n \sum_{n_s = n + k_1 - j_s + 1}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \sum_{n_s = n_{ik} + j_{ik} - j_i - k_2}^{(n_i - j_s + 1)} \frac{(n_i + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k_1)!}{(n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k_1 - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$



$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{\dots} \sum_{j_i=j_{sa}^i-1}^{\dots} \sum_{j_{ik}=j_i+1}^{\dots} \sum_{j_i=l_i+n-D}^{\dots} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

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$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=l_{ik}+l-j_{sa}^{ik}+2)}^{(l_i-l+1)} \\
 & \sum_{n+l_k}^n \sum_{(n_{is}=n+l_k+1)}^{(n_{is}+1)} \\
 & \sum_{n_{ik}+l_{k_2}-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{ik}+j_{ik}-j_i-l_{k_2})}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_{is}-n_{is}-1)!}{(j_{ik}-j_{ik}-2)! \cdot (n_{is}-j_s+1)!} \\
 & \frac{(n_{is}-n_{is}-l_{k_1}-1)!}{(j_{ik}-j_{ik}-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!} \\
 & \frac{(n_{ik}-n_s-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} - \\
 & \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \sum_{(j_i=l_i+n-D)}^{(\quad)}
 \end{aligned}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_k)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$D + s - n < l_i \leq D + l_{ik} + s - j_{sa}^{ik} \wedge$

$D \geq n < n \wedge I = l_k = 0 \wedge$

$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^{ik} > j_{sa}^{ik} - 1 \wedge$

$s: \{j_s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, \dots\} \wedge$

$s > 3 \wedge s = s + l_k \wedge$

$l_{k_2}: z = 2 \wedge l_k = l_{k_2} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{ik} - l_{k_1} - s)!}{(j_{ik} + l_{k_1} - j_i - l_{k_1})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^j \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
 \end{aligned}$$

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$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - n_s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - n_s)!} \cdot \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \sum_{s=1}^l \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{l_s+s-l} \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{j_i=l_i+n-D}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{\binom{(\cdot)}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, \dots, j_i} = \sum_{k=l}^{( )} (j_s = j_{ik} - j_{sa}^{ik} + 1)$$

$$\sum_{k=j_{sa}^{ik}+1}^{n+j_{sa}^{ik}-D-1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_{ik} - l + 1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(l + 1)}$$

$$\sum_{(n_i - j_s + 1)} \sum_{(n_{ik} + l_k - j_s + 1)}$$

$$\sum_{(n_{is} + j_{ik} - l_{k_1})} \sum_{(n_{ik} - j_i - l_{k_2})}$$

$$\sum_{(n_{is} + l_{k_2} - j_{ik})} \sum_{(n_s = n - j_i + 1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

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$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{( )} \sum_{(n_s=n_{ik}+l_{k_2}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - 2 \cdot \dots)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - \dots - n - 2 \cdot \dots)! \cdot (j_{sa}^s)!} \cdot \frac{1}{(n_{is} + j_s - j_s - s)!} \cdot \frac{(l_s - \dots - l + 1)! \cdot (j_s - 2)!}{(l_s - \dots - l_i)!} \cdot \frac{(D - j_i - n - l_i)! \cdot (n - j_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq \dots = n + 1$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + \dots - 1 \leq j_{ik} \leq \dots + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + \dots = l_s \wedge l_{ik} - j_{sa}^{ik} - s > l_{ik}$$

$$D + s - n < l_i \leq D + l_{ik} - \dots - n - j_{sa}^{ik} \wedge$$

$$D \geq \dots < n \wedge l = l_k > \dots \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - \dots \wedge j_{sa}^s > j_{sa}^i - 1 \wedge$$

$$s: \{ \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i \} \wedge$$

$$s > 3 \wedge s = \dots + l_k \wedge$$

$$l_k \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$



$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_1})} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_i-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_s-n_s-2)!}{(j_i-1)!(n_{ik}+j_{ik}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_i+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{\binom{()}{}} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\frac{\sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} (n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 1)!}{(j_s - l_s - 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + \mathbf{n} - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=\mathbf{l}_i+\mathbf{n}+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=\mathbf{n}_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(\ )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot$$

$$\frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)} \\ &\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\ &\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \\ &\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_s=l_i+n-D-s}^{(l_i-l-s+2)} \sum_{j_{ik}=j_i+l_i-j_s}^{(l_i-l+1)} \sum_{j_{sa}=j_{ik}+s-j_{sa}^{ik}}^{(n_i-j_s+1)} \\
& \sum_{n_i=n+l_k}^{(n_i-j_s+1)} \sum_{n_{is}=n+l_k-j_s+1}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
& \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{(n_{ik}+j_{ik}-j_i-l_{k_1})} \sum_{(n_s=n-j_i+1)}^{(n_i-n_{is}-1)!} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}^{(n_i-j_s+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(n)} \sum_{(j_i=j_{ik}+s-i_{ik}^s)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n-k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{(n)} \sum_{(n_{ik}+j_{ik}-j_i=n_{is}+j_s-j_{ik}-k_1)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - j_i - s - 2 \cdot k - j_{sa}^s)!} \cdot \frac{1}{(j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l \neq 1 \wedge l_s \leq D - n - 1 \wedge$

$1 < j_s \leq j_{ik} + j_{sa}^{ik} + 1 \wedge j_{ik} + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i - n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$D + s - n < \dots \leq D + j_{ik} + s - n - j_{sa}^{ik} \wedge$

$D > n \wedge I = k > 0 \wedge$

$j_{sa}^{ik} = j_{sa}^i \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^{i-1}, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$

$s > 3 \wedge s = s + k \wedge$

$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$

$$\begin{aligned}
 f z^S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{(l_i-l+1)} \\
 &\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 &\sum_{n_{is}+j_s-j_{ik}}^{(n_{ik}+j_{ik}-i-k_2)} \\
 &\sum_{n_{ik}=n+k_2-1}^{(n_s-n-j_i+1)} \\
 &\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 &\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 &\frac{(n_i - n_s - 1)!}{(n_{ik} + j_{ik} - n_s - j_i)!} \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 &\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 &\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\begin{aligned}
& \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + 1 - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)} \\
& \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{()} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{()} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!}
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i \wedge l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2$$

$$f_z^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$



$$\begin{aligned}
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{(\cdot)} \\
& \sum_{j_{ik} = l_{ik} + j_{sa}^{ik} - D - s}^{l_{ik}} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(\cdot)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_s = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(\cdot)} \\
& \frac{(n_{ik} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i \wedge l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{ik} + s - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned} &= \sum_{j_{ik}=j_{sa}^{ik}+1}^{(j_i)} \sum_{j_i=l_i+n-D}^{(l_i-l+1)} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \\ & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\ & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n+l_k}^{(n_i+l_k+1)} \sum_{(n_i=n+l_k+1)}$$

$$\sum_{(j_{ik}=n_{is}+j_{ik}-l_{k_1})}^{(\ )} \sum_{(j_i=l_{k_2})}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - n_s - \dots - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_{is} + j_{ik} + l_{k_1} - n_s - j_i - \dots - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = l \wedge l_s = D - n - 1 \wedge$$

$$D + l_s + s - n - l_i + \dots \leq l \leq l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + \dots \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + \dots = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$\dots < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = l > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=2)}^{(l_i-l+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=n-D)}^{(n_i-l+1)} \sum_{(n_{ik}+k)}^{(n_{is}=n+k-j_s-1)} \sum_{(n_{ik}-j_{ik}-k_1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \sum_{(n_{ik}=1)}^{(n_{ik}-j_{ik}+1)} \frac{(n_{ik}+n_{is}-1)!}{(j_s-2)! \cdot (n_{ik}+n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-k_1-1)!}{(n_{ik}-j_s-1)! \cdot (n_{ik}+j_s-n_{ik}-j_{ik}-k_1)!} \cdot \frac{(n_{ik}-n_s-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}^{( )} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_1})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$

$D \geq n < n \wedge I = l_{k_1} = 0 \wedge$

$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^{ik} > j_{sa}^{ik} - 1 \wedge$

$s: \{j_s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, \dots\} \wedge$

$s > 3 \wedge s \leq s + l_k \wedge$

$l_{k_2}: z = 2 \wedge l_k = \dots \wedge l_{k_2} \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=s+1)}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_{ik})!} \cdot \\
 & \frac{(n_s - j_i - n - l + 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(n_{ik} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_i-l+1)} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - l_s + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{s=1}^n \sum_{j_s=j_{ik}-j_{s\bar{a}}+1}^{j_{ik}-j_s} \sum_{j_{ik}=j_i+j_{s\bar{a}}-s}^{l_s+s-l} \sum_{j_i=s+1}^{l_s+s-l} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{(\cdot)} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(\cdot)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{s\bar{a}}^s)!} \cdot \\
 & \frac{1}{(n + j_{s\bar{a}}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz = \sum_{k=l}^{j_{ik} - j_{sa}^{ik} + 1} \sum_{(j_s=2)}^{j_{ik} - j_{sa}^{ik} + 1}$$

$$\sum_{ik=j_{sa}^{ik}+1}^{l_s + j_{sa}^{ik}} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$



$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_{ik}=j_{sa}^{ik})}$$

$$\sum_{n+l_k}^{(n_i-j_s+1)} \sum_{(n_i+l_k-j_s+1)}$$

$$\sum_{n_i+l_k-j_{ik}-l_k_1}^{(n_i-j_s+1)} \sum_{(n_i+l_k-j_{ik}-l_k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

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$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_s=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{( )} \sum_{(n_s=n_{ik}+j_s-j_i-\mathbb{k}_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - 2) \cdot (n - 2)!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2)! \cdot (j_{sa}^s)!}$$

$$\frac{1}{(n + j_s - j_s - s)!}$$

$$\frac{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(n - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq n - 1$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_{sa}^{ik} \wedge$$

$$l_s - j_{sa}^{ik} + j_{sa}^{ik} \geq l_s \wedge l_s + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - s$$

$$D \geq l_{ik} < n \wedge l = \mathbb{k} > 1 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - s \wedge j_{sa}^s > j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^i - \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = j_{sa}^i + \mathbb{k} \wedge$$

$$\mathbb{k}_2 = j_{sa}^i - \mathbb{k}_1 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-l+1} \binom{(\quad)}{j_i=j_{ik}+s-j_{sa}^{ik}}$$

$$\sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{n_s=n_{ik}+j_{ik}-j_i-l_{k_1}}^{(n_s-n_{ik}-j_{ik}+1)}$$

$$\frac{(n_i-1) \dots (n_i-n_{is}+1)!}{(j_s-2) \dots (n_i-n_{is}+1)!}$$

$$\frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1) \dots (n_{is}-n_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{\dots - n_s}{(j_i-1) \dots (n_{ik}+j_{ik}-n_s-j_i)!}$$

$$\frac{(n_s-n_{is}-1)!}{(n_s-n_{is}-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-j_s-l_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \binom{(\quad)}{j_i=j_{ik}+s-j_{sa}^{ik}}$$

$$\sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \binom{(\quad)}{n_s=n_{ik}+j_{ik}-j_i-l_{k_2}}$$

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$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\}$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z \cdot 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)} \sum_{j_{ik}=j_i + j_{sa}^{ik} - s}^{(l_s + s - l)} \sum_{(j_i=l_i + n - D)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i - j_s + 1)} \sum_{n_{ik}=n+\mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^k + 1)!} \cdot \\
& \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)} \\
& \sum_{j_{ik}=j_i+j_{sa}^k-s}^{(l_i - l + 1)} \sum_{(j_i=l_s+s-l+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=l}^{( )} \sum_{j_s=j_{ik}^{ik}+1}^{( )} \sum_{j_{ik}=j_i+j_s}^{( )} \sum_{j_i=l_i+n-D}^{( )} \sum_{n_{is}+lk}^{( )} \sum_{n_{is}=n+lk-j_s+1}^{( )} \sum_{=n_{is}+j_s-lk-lk_1}^{( )} \sum_{(n_s=n_{ik}+j_{ik}-j_i-lk_2)}^{( )} \frac{(n_{is} + n_{ik} + j_{ik} + lk_1 - n_s - j_i - s - 2 \cdot lk)!}{(n_{is} + n_{ik} + j_s + lk + lk_1 - n_s - j_i - n - 2 \cdot lk - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > l_s \wedge n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = lk > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

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$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik})} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik})} \dots$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-1}^{l_s+j_{sa}^{ik}-1} \dots$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \dots$$

$$\sum_{n_{ik}=n_{i_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}+1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-l+1}^{l_s+j_{sa}^{ik}-l-s+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n+l_{k_2}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_1})} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_s-n_s-1)!}{(j_i-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=l}^j \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} - j_s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - 1 \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_z = 2 \wedge \mathbb{k} = \mathbb{k}_1 = \mathbb{k}_2 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-l-s+1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{\binom{()}{j_i=j_{ik}+s-j_{sa}^{ik}}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + \dots - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-l-s+1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}
 \end{aligned}$$

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$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=0}^{(l_s - l + 1)} \sum_{l_i = D - s + 1}^{(l_s - l + 1)} \sum_{j_s = j_s + j_{sa}^{ik} - 1}^{(j_s - l)} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})} \sum_{n_i = n + k}^n \sum_{(n_s = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - k_2)}^{( )} \frac{(n_{ik} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}^{(k+1)}} = \sum_{l=1}^{\mathbb{k}_1} \sum_{(j_s=2)}^{\mathbb{k}_1} \sum_{(l_s=l)}^{\mathbb{k}_1} \sum_{(i_i=l_{ik}+n+s-D-j_{sa}^{ik})}^n \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{lk}-s}^{(l_{ik}+s-l-j_{sa}^{lk})} \sum_{(j_i=l_{ik}+s-l+1)}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_k+1)}$$

$$\sum_{n_{ik}+l_{k2}-j_{ik}}^{n_{is}+j_s-j_{ik}-1} \sum_{(n_{ik}+j_{ik}-j_i-l_{k2})} \sum_{(j_i=j_i+1)}$$

$$\frac{(n_{is} - n_{ik} - l_{k1} - 1)!}{(j_{ik} - j_i - 1)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k1} - 1)!}{(j_{ik} - j_i - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k1})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{lk} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{lk} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{lk}+1)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{lk}-s}^{(l_s+s-l)} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{lk})}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_1})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!} \cdot$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - n)!} \cdot$$

$$\frac{(D - n)!}{(D - j_i - n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - 1 \wedge$$

$$D \geq n < n \wedge l = l_{k_1} = 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^{ik} > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, \dots, j_i\} \wedge$$

$$s > 3 \wedge s \leq s + l_k \wedge$$

$$l_{k_2}: z \geq 2 \wedge l_k = l_{k_2} \Rightarrow$$

$$f_z^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\frac{\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_{ik})!} \cdot \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_{ik} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)} \sum_{j_{ik}=l_s+j_{sa}^{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)} \frac{\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_{ik})!} \cdot \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_{ik} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - 1)! \cdot (j_{ik} - j_s - l_s + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{s=1}^l \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_{ik}-j_{sa}^{ik}}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_{sa}^{ik}-1} \sum_{j_i=j_{ik}+s-j_{sa}^{ik}}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_s=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$



$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, \dots, j_i} &= \sum_{k=l}^{\binom{n-D-j_{sa}^{ik}}{j_s=2}} \\ & \sum_{j_i=l_{ik}+n-D}^{\binom{l_{ik}-l+1}{j_i=j_{ik}+s-j_{sa}^{ik}}} \sum_{n_i=n+\mathbb{k}}^{\binom{n_i-j_s+1}{n_{is}=n+\mathbb{k}-j_s+1}} \\ & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \\ & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\ & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \end{aligned}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=i+j_{sa}^{ik}-1}^{l_{ik}-l+1} \sum_{(j_{sa}^{ik})}$$

$$\sum_{(n_i-j_s+1)} \sum_{(n_{ik}+l_k-j_s+1)}$$

$$\sum_{(n_{is}+j_{ik}-l_{k_1})} \sum_{(n_{ik}-j_i-l_{k_2})}$$

$$\sum_{(n_{is}+l_{k_2}-j_{ik})} \sum_{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})} \sum_{n_i=n+\mathbb{k}} \sum_{(n_s=n+\mathbb{k}-j_{sa}^{ik})} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{sa}^{ik}-j_i-\mathbb{k}_2)} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - 2 \cdot \dots)!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \dots)!} \cdot \frac{1}{(n_{is} + j_s - j_s - s)!} \cdot \frac{(l_s - \dots - l + 1)! \cdot (j_s - 2)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq \dots = n + 1$$

$$D + l_s + s - n - l_i + 1 \leq \dots \wedge l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq \dots + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} < j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > \dots \wedge$$

$$j_{sa}^{ik} - j_s - 1 \wedge j_{sa}^{ik} > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$j_{sa}^{ik} = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=2)}^{(l_s-l+1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{(n_{ik}+j_{ik}-j_i-l_{k_1})} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_{is}-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_s-n_{ik}-n_s)!}{(j_i-1)!(n_{ik}+j_{ik}-n_s-j_i)!} \cdot \\
 & \frac{(n_i-1)!}{(n_s)!(j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}
 \end{aligned}$$

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$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! (n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq i \wedge l - 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_s^{ik} \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$

$s > 2 \wedge s = s + \mathbb{k}$

$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$

$$fz_{j_s, j_{ik}, j_i}^S = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l - 1)!}{(l_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\cdot)} \\
 & \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(\cdot)} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(\cdot)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

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$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)} \\ &\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\ &\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\ &\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\ &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=l_i}^{(l_i+1)} \frac{\binom{l_i+1}{k}}{\binom{l_i+1}{l_{ik}+n-j_{sa}^{ik}+1}} \cdot \sum_{j_s=j_s+j_{sa}^{ik}-l_{ik}}^{\binom{l_i+1}{j_s}} \sum_{j_{ik}=j_{ik}+s-j_{sa}^{ik}}^{\binom{l_i+1}{j_{ik}}} \sum_{n_{is}=n_{is}+l_{ik}}^{\binom{l_i+1}{n_{is}}} \sum_{n_{ik}=n_{ik}+l_{ik}}^{\binom{l_i+1}{n_{ik}}} \frac{\binom{l_i+1}{n_{is}+l_{ik}} \binom{l_i+1}{n_{ik}+l_{ik}}}{\binom{l_i+1}{n_{is}+n_{ik}+l_{ik}}} \cdot \frac{\binom{l_i+1}{n_{is}+n_{ik}+l_{ik}-l_{k_1}} \binom{l_i+1}{n_s=n_{ik}+j_{ik}-j_i-l_{k_2}}}{\binom{l_i+1}{n_s=n_{ik}+j_{ik}-j_i-l_{k_2}}} \cdot \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_{k_2})!}{(n_{is} + n_{ik} + j_s + l_{k_1} + l_{k_2} - n_s - j_i - n - 2 \cdot l_{k_2} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > l_i + n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 - j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$



$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \frac{\sum_{k=1}^{l_s-l+1} \sum_{j_s=2}^{(l_s-l+1)}}{\sum_{j_{ik}=l_{ik}+n}^{l+1} \sum_{j_i=j_{ik}+s-j_{sa}^{ik}}^{(j_s+1)}} \cdot \frac{\sum_{n_{ik}=\mathbb{k}_2-j_{ik}+1}^{n_{ik}+j_{ik}-j_i-\mathbb{k}_2} \sum_{n_{is}=\mathbb{k}_1+j_{ik}-j_i-\mathbb{k}_2}^{n_{is}+j_{ik}-j_i-\mathbb{k}_2}}{\sum_{n_{ik}=\mathbb{k}_2-j_{ik}+1}^{n_{ik}+j_{ik}-j_i-\mathbb{k}_2} \sum_{n_{is}=\mathbb{k}_1+j_{ik}-j_i-\mathbb{k}_2}^{n_{is}+j_{ik}-j_i-\mathbb{k}_2}} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_k}^{( )} \sum_{(n_{ik}=n_{is}+j_{ik}-j_i)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_{sa}^{ik} + j_{sa}^{ik} + l_{k1} - j_i - s - l_k - j_{sa}^s)!}$$

$$\frac{1}{+ j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$((D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_k - j_{sa}^{ik} - 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n) \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}^{ik}} = \sum_{l=1}^{(j_s-1)} \sum_{(j_s=2)}^{(j_s+l-1)} \sum_{i_k=j_{sa}^{ik}+1}^{(j_s+s-l)} \sum_{(j_i=s+1)}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

$$l_{ik} - l + 1$$

$$j_{ik} = j_{sa}^{ik} + 1$$

$$(n_i - j_s + 1)$$

$$n_{is} + l_{ik} - l_{k_1} - 1$$

$$n_{is} + l_{k_2} - j_{ik} - 1$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - l_{k_1} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

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$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=s+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_k}^{(\cdot)} \sum_{(n_{ik}+j_{ik}-j_i)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + \dots + j_i + l_{k1} - \dots - j_i - s - l_k - j_{sa}^s)!} \cdot \frac{1}{(j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$((D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_k - j_{sa}^{ik} - 1 > l_s \wedge l_i - j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n) \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}} = \sum_{l=1}^{j_s - \mathbb{k} + 1} \sum_{(j_s=2)}^{l+1} \sum_{j_{ik} = j_{ik} + 1}^{l+1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{n} \sum_{n_i = n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{n_{is} = n + \mathbb{k} - j_s + 1}^{(n_{is} + j_s - j_{ik} - \mathbb{k}_1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \sum_{(n_s = n - j_i + 1)}^{(n_i - n_{is} - 1)!} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_s + j_{sa}^{ik} - l + 1}^{l_{ik} - l + 1} \sum_{(j_s=2)}$$

$$\sum_{n+l_k}^{(n_i - j_s + 1)} \sum_{(n_i - j_s + 1)}$$

$$\sum_{n_i + l_k - j_{ik} - l + 1}^{n_{is} + j_{ik} - l_{k_1}} \sum_{(n_i - j_s + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n_{ik}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{( )} \sum_{(n_{ik}+j_{ik}-j_i-j_{sa}^{ik})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + j_{sa}^{ik} - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - j_i - l_{k_1} - j_{sa}^{ik} - j_{sa}^{ik} - j_{sa}^{ik})!} \cdot \frac{1}{(j_{sa}^{ik} - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_s - j_{sa}^{ik} - 1 > l_s \wedge l_i - j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$(D \geq n < n \wedge l_s \neq l_i \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$



$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, n, l_i} = \sum_{k=l}^{l+1} \sum_{(j_s=2)}^{l+1}$$

$$\sum_{j_{ik}=j_{sa}^{ik}-1}^{l+1} (j_i=j_{ik}+s-j_{sa}^{ik})$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{(n - j_s + 1)} \sum_{(j_s=2)}$$

$$\sum_{n+l}^{(n+l-k-j_s+1)} \sum_{(n+l-k-j_s+1)}$$

$$\sum_{n_{ik} = n_{is} - j_{ik} - k_1}^{(n_{ik} + j_{ik} - j_i - k_2)}$$

$$\frac{(n_{is} + n_{ik} - j_{ik} + k_1 - n - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} - j_{ik} + k_1 - n - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$(D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$j_{sa}^{ik} - j_{sa}^{ik} > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}^{ik}} = \sum_{l=1}^{j_s} \sum_{(j_s=2)}^{(j_s+1)} \sum_{j_{ik}=1}^{j_i - j_s + s - l} \sum_{(j_i=l_i+n-D)}^{(j_i+l_i+n-D)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = 2)}$$

$$\sum_{j_{ik} = l_{ik} + n}^{l_{ik} - l + 1} \sum_{(j_s = 2)}$$

$$\sum_{(n_i - j_s + 1)} \sum_{(n + k - j_s + 1)}$$

$$\sum_{(n_s = n - j_i + 1)} \sum_{(j_i - k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

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$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+n-1)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n-k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k}^{(\cdot)} \sum_{(n_{ik}+j_{ik}-j_i=n-1)}^{(\cdot)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + \dots + j_i + k_1 - \dots - j_i - s - k - j_{sa}^s)!}$$

$$\frac{1}{(n_{is} + n_{ik} + \dots + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$((D \geq n < n \wedge l_i \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_k - j_{sa}^{ik} - 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_i \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$D \geq n < n \wedge l_i = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik})} \sum_{(j_s=2)}^{(j_s-1)} \sum_{(l_s+l-k-1)}^{(l_s+l-1)} \sum_{(j_{ik}+n-D)}^{(j_i+l-1)} \sum_{(n_i=n+\mathbb{k})}^n \sum_{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=i)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \sum_{(n_s=n-j_i+1)}^{(n_i-n_{is}-1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\begin{aligned}
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{ik}^{ik})}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{is}+j_s-j_{ik}} \sum_{(n_{is}+j_{ik}-i-k_2)} \\
 & \sum_{n_{ik}=n+k_2-1} \sum_{(n_s=n-j_i)} \\
 & \frac{(n_i - n_s - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_s - n_s - 1)!}{(n_{ik} + j_{ik} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{(j_{sa}^s - s)!}{(l_s - l - 1)!} \cdot \frac{(D - \mathbf{n})!}{(D - j_i - \mathbf{n} - \mathbf{n} - j_i)!}$$

$$(D \geq \mathbf{n} < n \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq \mathbf{n} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_s + s - \mathbf{n} - 1) \vee$$

$$(D \geq \mathbf{n} < n \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq \mathbf{n} \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$D + s - \mathbf{n} < l_i \leq D + l_s + s - \mathbf{n} - 1)) \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$



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$$\begin{aligned}
 f z^S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{(l_i+n-D-s)} \\
 &\sum_{j_{ik}=l_{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \\
 &\sum_{n_i=n+l_k}^n \sum_{(n_{is}=l_k-j_s+1)}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n+l_{k_2}+1}^{n_{is}+j_s-j_{ik}} \sum_{(n_s=n-j_i)}^{(n_{ik}+j_{ik}-l_{k_2})} \\
 &\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 &\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \\
 &\frac{(n_{ik} - n_s - 1)!}{(n_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 &\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 &\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 &\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_{ik})!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_i + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_i + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}
 \end{aligned}$$

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$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! (n - j_i)!}$$

$((D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq i \wedge l - 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$

$(D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq i \wedge l - 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_i - s + 1 > l_s$

$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} - j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} - j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$

$2 \cdot \mathbb{k} = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-l_{k_1}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_1})} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_s-n_s)!}{(j_i-l_{k_1}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!} \cdot \\
 & \frac{(n_i-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{(\cdot)}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - 1)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l = i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{ik} - j_{sa}^{ik} - 1$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$l_i \leq D + s - n \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$

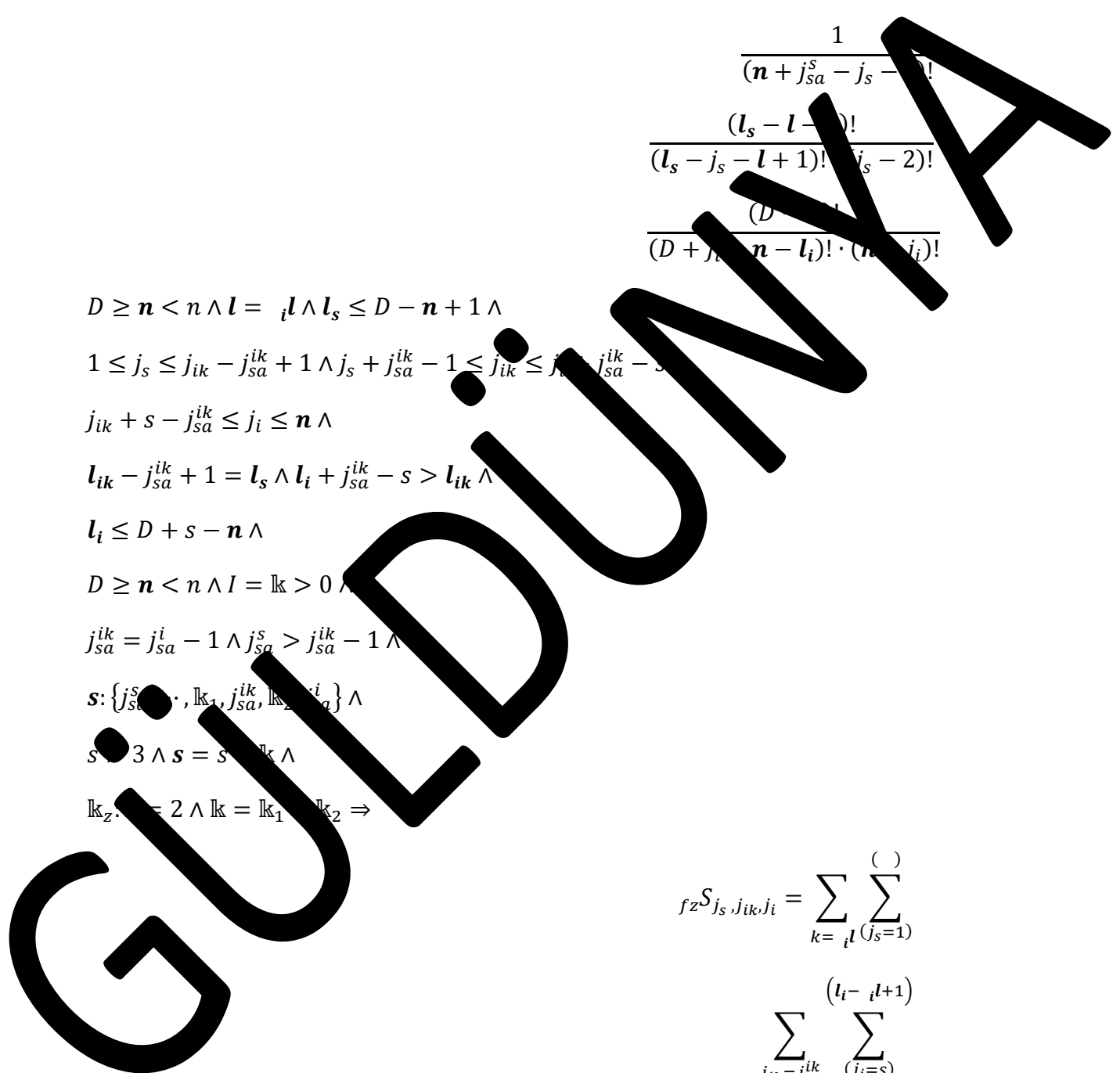
$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, \dots, i\} \wedge$

$s \geq 3 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_z \cdot \dots = 2 \wedge \mathbb{k} = \mathbb{k}_1 \wedge \mathbb{k}_2 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=1}^{\binom{(\cdot)}{j_s=1}} \sum_{\binom{(l_i - i + 1)}{j_i=s}} \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_i=s)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_{ik}-\mathbb{k}_1+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_s=n-j_i+1}^{n_{ik}+j_{ik}-j_i-\mathbb{k}_2}$$



$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(l_i + j_{sa}^{ik} - j_i - l_{ik})! \cdot (j_i - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$\sum_{j_{ik}=1}^{n_i} \sum_{(j_s=1)}^{n_s} \sum_{j_{ik}=j_{sa}^{ik}}^{n_i} \sum_{(j_i=s)}^{n_i} \sum_{n_i+\mathbb{k} \leq n_{ik} \leq n_i-j_{ik}-\mathbb{k}_1+1} \sum_{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}^{n_s}$$

$$\frac{(n_i - n_{ik} + j_{ik} - \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{ik} + j_{ik} + j_{sa}^{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq l_i < n \wedge l = l_i \wedge l_i \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge n_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} - j_{sa}^{ik} \leq j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$s > 3 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=i}^{\binom{D}{l}} \sum_{(j_s=1)}^{\binom{D-l}{l}}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{\binom{D-l}{l}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{\binom{n-j_{ik}-\mathbb{k}_1}{n_i-j_{ik}-\mathbb{k}_1+1}} \sum_{(n_s=n-j_i)}^{\binom{n-j_i-\mathbb{k}_2}{n_s=n-j_i-\mathbb{k}_2}}$$

$$\frac{(n_i - j_{ik} - \mathbb{k}_1 - 1)!}{(j_i - 2)! \cdot (n_i - n_{ik} - \mathbb{k}_1 + 1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s - j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^{\binom{D}{l}} \sum_{(j_s=1)}^{\binom{D-l}{l}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{\binom{D}{l}} \sum_{(j_i=s)}^{\binom{D-l}{l}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{\binom{D-l}{l}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{\binom{D-l}{l}}$$

$$\frac{(n_i + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

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$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = {}_i l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$j_s, j_{ik}, j_i = \sum_{k=i}^{l_{ik}-i^{l+1}} \sum_{(j_s=1)}^{(j_i=j_{ik}+s-j_{sa}^{ik})}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(j_i=j_{ik}+s-j_{sa}^{ik})}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_s=n-j_i+1}^{n_{ik}+j_{ik}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$\sum_{k=i}^{()} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{(j_i=)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1+1)}^{()} n_s=n_{ik}-j_i-k_2$$

$$\frac{(n_i + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - k_2)!}{(n_i + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - k - j_{sa}^s)! \cdot (n - s)!}$$

$$(D \geq n < n \wedge l = i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l = i \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n) \vee$$

$$(D \geq n < n \wedge l = i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_i} = \sum_{k=i}^{\binom{D}{s}} \sum_{l=\binom{D}{s-1}}^{\binom{D}{s}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j_i=j_{sa}^{ik}+s-j_{sa}^{ik})}^{(l_i-i^{l+1})}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_s=n-j_i+}^{(n_i+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - \mathbb{k}_1 - 1)!}{(n_i - 2)! \cdot (n_i - n_{ik} - \mathbb{k}_1 + 1)!}$$

$$\frac{(n_{ik} + n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^{\binom{D}{s}} \sum_{l=\binom{D}{s-1}}^{\binom{D}{s}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{\binom{D}{s}} \sum_{(j_i=s)}^{\binom{D}{s}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{\binom{D}{s}} \sum_{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}$$

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$$\frac{(n_i + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{zS} j_i = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_{ik}+s-l-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot$$

$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=0}^{l-1} \sum_{j_s=j_{ik}+l_s-k}^{j_s+l-1} \sum_{j_{ik}=l_{ik}+s-k}^{j_{ik}+l-1} \sum_{j_i=l_{ik}+s-k}^{j_i+l-1} \sum_{j_{sa}^{ik}=k}^{j_{sa}^{ik}+2} \\
 & \sum_{n_i=n+k}^{n_i-j_{ik}-k_1} \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{ik}+j_{ik}-j_i-k_2} \sum_{n_s=n-j_i+1}^{(n_s-n-j_i+1)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{lk}-s}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \sum_{(j_i=l_i+n-D)}^{(\cdot)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{ik}}^{(\cdot)} \sum_{(n_{ik}+j_{ik}-j_i)}^{(\cdot)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + \dots + j_i + l_{k1} - \dots - j_i - \dots - l_k - j_{sa}^s)!} \\
 & \frac{1}{+ j_{sa}^s - j_s - s)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{lk} \leq j_i < n \wedge$

$l_{ik} - j_{sa}^{lk} + 1 = l_s \wedge l_i - j_{sa}^{ik} - s > l_{ik} \wedge$

$D \geq n < n \wedge l = l_k > \dots \wedge$

$j_{sa}^{lk} - j_{sa}^{ik} - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^{lk}, l_2, j_{sa}^i\} \wedge$

$s > \dots = s + l_k \wedge$

$l_{kz}: z = 2 \wedge l_k = l_{k1} + l_{k2} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_1})} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_i-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_s-n_{ik}+j_{ik}-n_s-j_i)!}{(j_i-n_{ik}-1)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_i+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{\binom{)}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{)}{}} \\
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_i - s)!}{(j_{ik} + l_i - l - 1)! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)} \\
& \sum_{j_{ik} = j_i + j_{sa}^{ik} - s}^{(l_s + s - l)} \sum_{(j_i = l_i + n - D)}^{(l_s + s - l)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(\cdot)} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_{z, j_s, l_i} = \sum_{k=l}^{( )} (j_s = j_{ik} + l_s - l_{ik})$$

$$\sum_{l_{ik}=l_i+n-D}^{n+j_{sa}^{ik}-1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$



$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(l+1)}$$

$$\sum_{n+l+k}^{(n-j_s+1)} \sum_{(n+l+k-j_s+1)}$$

$$\sum_{n_{is}+j_{ik}-k_1}^{(n_{is}+j_{ik}-k_1)} \sum_{(n_{is}+j_{ik}-k_2)}^{(n_{is}+j_{ik}-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - k_1 - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

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$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{( )} \sum_{(n_s=n_{ik}+j_s-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - 2 \cdot \dots)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - n - 2 \cdot \dots)! \cdot (j_{sa}^s)!}$$

$$\frac{1}{(n_{is} + j_s - j_s - s)!}$$

$$\frac{(l_s - \dots - l + 1)! \cdot (j_s - 2)!}{(l_s - \dots - l_i)!}$$

$$\frac{(D - j_i - n - l_i)! \cdot (n - j_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + \dots$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s - j_{sa}^{ik} - 1 \leq j_{ik} - j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + \dots = l_s \wedge l_{ik} - j_{sa}^{ik} - s > l_{ik}$$

$$D \geq n < n \wedge l_s > 0 \wedge$$

$$j_{sa}^{ik} = j_i - 1 \wedge j_{sa}^s > j_{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, l_{k_2}, j_s^i\} \wedge$$

$$s > \dots = s + l_k \wedge$$

$$l_{k_2}: z = 2 \wedge \dots = l_{k_1} + l_{k_2} \Rightarrow$$

$$f_z^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-s-1}^{l_i-l+1} \sum_{(j_i=l_i+n-D)}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_{ik})!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{\binom{)}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{)}{}} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
 \end{aligned}$$

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$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - n_s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - n_s)!}$$

$$\frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{l=1}^{\infty} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{l_s=j_{sa}^{ik}-l}^{\infty} \sum_{n+j_{sa}^{ik}-D-s}^{(\cdot)} (j_i=j_{ik}+s-j_{sa}^{ik})$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{(\cdot)} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned}
 & f_z S_{j_s} \sum_{k=0}^{(l_i+n-D-s)} \sum_{k=j_{sa}^{ik}+1}^{(l_i-l+1)} \sum_{i_{ik}=j_s+l_{ik}-l_s}^{(n_i-j_s+1)} (j_i=l_i+n-D) \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_i-l+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(n_i-l+1)} \\
 & \sum_{n+l_k}^{(n+l_k)} \sum_{(n_{is}=n+l_k+1)}^{(n_i-l+1)} \\
 & \sum_{n_{is}+j_s-j_{ik}-l_s}^{(n_{ik}+j_{ik}-j_i-l_k)} \sum_{(j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_k)} \\
 & \frac{(n_{is}-l_k-1)! \cdot (n_{is}-j_s+1)!}{(j_{ik}-j_i-1)! \cdot (n_{is}-j_s+1)!} \cdot \\
 & \frac{(n_{is}-l_k-1)!}{(j_{ik}-j_i-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_k)!} \cdot \\
 & \frac{(n_{ik}-n_s-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} - \\
 & \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_i-l+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(n_i-l+1)}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{i_s} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{i_s} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: (j_{sa}^s, \dots, \mathbb{k}_1, j_s, \mathbb{k}_2, j_{sa}^i)$

$s > 1 \wedge s = s + \mathbb{k} \wedge$

$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=l_s+n-D)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + \mathbf{n} - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_s-l+1)} \\
& \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}
\end{aligned}$$



$$\begin{aligned}
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=0}^{(l_s - l + 1)} \sum_{l_i = D - s + 1}^{(l_s - l + 1)} \\
& \sum_{j_s = j_s + l_{ik} - l_s}^{(j_s - l)} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(j_i - l)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(j_i - l)} \\
& \frac{(n_i + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{j_s+l-1} \sum_{j_i=l_i+1}^{j_i+l-1} \sum_{j_{ik}=j_i+n-D}^{j_{ik}+n-D} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{j_s-j_{ik}-k_1} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\ )}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_{ik}+s-l-j_{sa}^{ik})} \sum_{(j_{ik}+n-D)}^{(n_i+1)}$$

$$\sum_{(n+l)}^{(n_i+n+l+1)}$$

$$\sum_{(j_{ik}=n_{is}+j_{ik}-k_1)}^{(\ )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = D - n - 1 \wedge$$

$$D + j_s + s - n - l_i - 1 \leq l \leq n - n + 1 \wedge$$

$$1 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j_i \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-1}^{n_{is}+j_s-j_{ik}} \sum_{(n_s=n-j_i+k_2)}^{(n_i+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} + j_s - 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_s - n_s - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+n-D)}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - 1)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_s - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - 1 = l \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

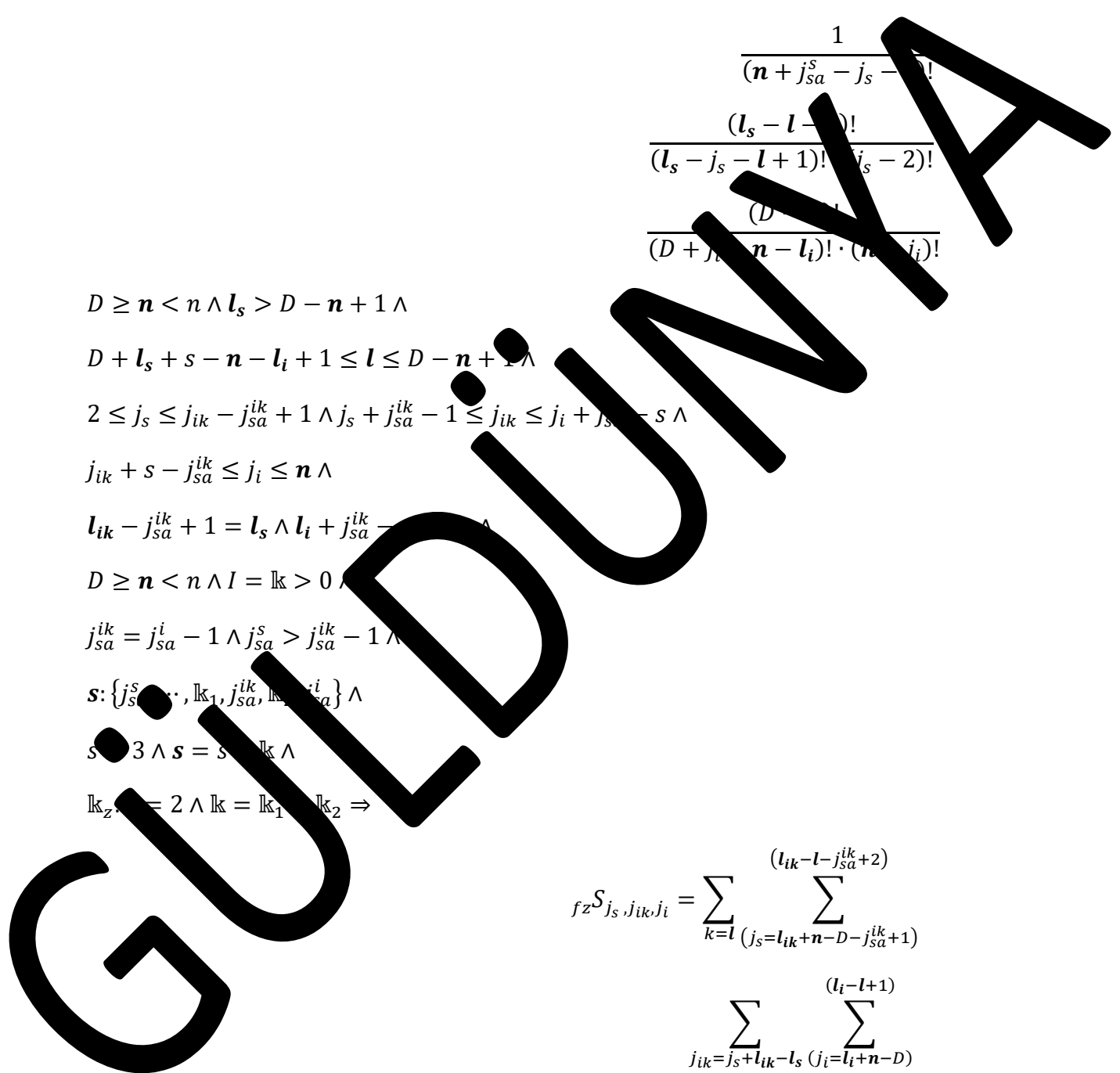
$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$

$s: \{j_s^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}^{(n-j_s+1)} \sum_{n_i=n+\mathbb{k}}^{(n_{is}=n+\mathbb{k}-j_s+1)}$$



$$\begin{aligned}
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + \mathbf{n} - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(j_i=j_{ik}+s-j_{sa}^{ik})} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(j_i=j_{ik}+s-j_{sa}^{ik})} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot
 \end{aligned}$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_{s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = j_i + l_{ik} - l_i} \sum_{(j_i = l_i + n - D)}^{(l_s + s - l)}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\begin{aligned}
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(l_i - l + 1)} \sum_{j_i + l_{ik} - l_i}^{(n - j_i - l + 1)} \sum_{n_i = n + k}^{(n_i - j_s + 1)} \sum_{n_{is} = n + k - j_s + 1}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_i - j_{ik} - k_1} \sum_{n_s = n - j_i + 1}^{(n_{ik} + j_{ik} - j_i - k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
\end{aligned}$$



$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_i+n)}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-1}^{( )} \sum_{(j_s=n_{ik}+j_{ik}-j_i)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - \dots - 2 \cdot l_k)!}{(n_{is} + n_{ik} + \dots + j_i + l_{k1} + \dots - j_i - \dots - l_k - j_{sa}^s)!}$$

$$\frac{\dots + j_{sa}^s - j_s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s \dots D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge n_{is} + j_{sa}^{ik} - 1 \leq j_i \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$D \geq n < n \wedge l = l_k > \dots \wedge$

$j_{sa}^{ik} - j_s - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, l_{k2}, j_{sa}^i\} \wedge$

$j_{sa}^s = s + l_k \wedge$

$l_{k2}: z = 2 \wedge l_k = l_{k1} + l_{k2} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-l}^{l_s+j_{sa}^{ik}-l} \binom{(\quad)}{\quad} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_1})} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_i-n_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-l-s+1}^{l_i+j_{sa}^{ik}-l-s+1} \binom{(\quad)}{\quad} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - 1)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_s - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\cdot)} \\
& \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + l_i - l_{ik})}^{(\cdot)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(\cdot)} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f^{z=2}(j_{ik}, j_i) = \sum_{k=l}^{l_i+n-D-s} \binom{l_i+n-D-s}{k} \binom{l_i+n-D-s}{j_i-k}$$

$$j_{ik} = l_i + j_{sa}^{ik} - l - s + \sum_{k=l}^{l_i+n-D-s} \binom{l_i+n-D-s}{k} \binom{l_i+n-D-s}{j_i-k}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=i+j_{sa}^{ik}-1}^{l_i+j_{sa}^{ik}-l-s+1}$$

$$\sum_{n_{is}+j_{ik}-l_{k_1}}^{(n_i-j_s+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - n_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+l_i)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+l_i-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_i - l_{k_2})! \cdot 2 \cdot (j_s - 1)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - l_i - l_{k_2})! \cdot (j_s - n - 2)! \cdot (j_{sa}^s)!}$$

$$\frac{1}{(n_{is} + j_s - j_s - s)!}$$

$$\frac{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(j_s - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s - j_{sa}^{ik} - 1 \leq j_{ik} - j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{lk} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{lk} + j_{sa}^{lk} > l_s \wedge l_{ik} + j_{sa}^{lk} - s = l_{ik}$$

$$D \geq n < n \wedge l_s - l_{k_1} > 0 \wedge$$

$$j_{sa}^{lk} = j_i - 1 \wedge j_{sa}^s > j_{sa}^{lk} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{lk}, l_{k_2}, j_s^i\} \wedge$$

$$s > j_s = s + l_{k_1} \wedge$$

$$l_{k_2}: z = 2 \wedge l_{k_2} = l_{k_1} + l_{k_2} \Rightarrow$$

$$f_z^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(j_{ik}-j_{sa}^{lk}+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{lk})}^{(l_s+s-l)}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_{ik})!} \cdot \\
 & \frac{(n_s - j_i - n - l + 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_{ik} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(n_i-j_s+1)} \\
 & \sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=l_s+s-l+1)}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
 \end{aligned}$$

GÜLDÜSÜZ

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - 1)! \cdot (j_{ik} - j_s - l_s + 1)!}$$

$$\frac{(D - l_i)!}{(n - l_i - 1)! \cdot (n - j_i)!}$$

$$\sum_{s=1}^n \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_s=j_{ik}-j_{sa}^{ik}+1}$$

$$\sum_{j_i=l_{ik}+n+s-D-j_{sa}^{ik}}^{l_s+s-l}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$



$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned} & \sum_{j_s = j_{sa}^{ik} - 1}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{j_i = j_{sa}^{ik} - 1}^{(j_i + j_{sa}^{ik} - s)} \sum_{j_{ik} = l_{ik} + n - D}^{(j_{ik} + j_{sa}^{ik} - s)} \sum_{j_i = l_{ik} + n - D}^{(j_i + j_{sa}^{ik} - s)} \\ & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \end{aligned}$$

$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}^{( )} \\
 & \sum_{j_{ik} = l_s + j_{sa}^{ik} - l + 1}^{l_{ik} - l + 1} \sum_{(j_i = j_{ik} + l_i - l_{ik})}^{( )} \\
 & \sum_{i=n+k}^n \sum_{(n_{is} = n - k)}^{(n_{is} + 1)} \\
 & \sum_{(n_{is} + j_s - j_{ik} - l)}^{(n_{ik} + j_{ik} - j_i - l)} \\
 & \sum_{(n_{ik} + k_2 - j_{ik})}^{(n_{ik} - j_i + 1)} \\
 & \frac{(n_{is} - l - k_1 - 1)!}{(n_{is} - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - l - k_1 - 1)!}{(j_{ik} - l - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} - \\
 & \sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{( )} \\
 & \sum_{j_{ik} = l_{ik} + n - D}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + l_i - l_{ik})}^{( )}
 \end{aligned}$$

GÜLDÜZMÜŞA

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: (j_{sa}^s, \dots, \mathbb{k}_1, j_s, \mathbb{k}_2, j_{sa}^i)$

$s > 1 \wedge s = s + \mathbb{k} \wedge$

$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=l_s+n-D)}^{(l_{ik}+n-D-j_{sa}^{ik})}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\quad)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(j_s - l - 1)! \cdot (l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + \mathbf{n} - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)} \\
& \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\quad)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(l_s-l+1)} \sum_{j_s=j_s+j_{sa}^{ik}-1}^{(j_s+j_{sa}^{ik}+1)} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(n_i-j_s+1)} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_s=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{(n_i-j_s+1)} \\
& \frac{(n_{ik} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}}} = \sum_{l=1}^{(1)} \sum_{(j_s=l_s+n-D)}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-)} \sum_{(l_i+n-D)}$$

$$\sum_{(n_{is}=n)}^{(n_{is}+1)}$$

$$\sum_{(n_{is}=n)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} - n_s - i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i = D - n - 1 \wedge$$

$$D + j_s + s - n - l_i - 1 \leq l \leq n - n + 1 \wedge$$

$$\leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j_{sa}^{ik} \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_i+j_{sa}^{lk}-l-s+1} \sum_{(j_i=j_{ik}+l_i-l)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-1}^{n_{is}+j_s-j_{ik}} \sum_{(n_s=n-j_i+k_2)}^{n_{is}+j_{ik}-l_{ik}-k_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_s - n_s - 1)!}{(n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{lk} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{lk} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{lk}+1)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_s+j_{sa}^{lk}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - 1)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_s - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - 1 > l_s \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$

$s: \{j_s^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$

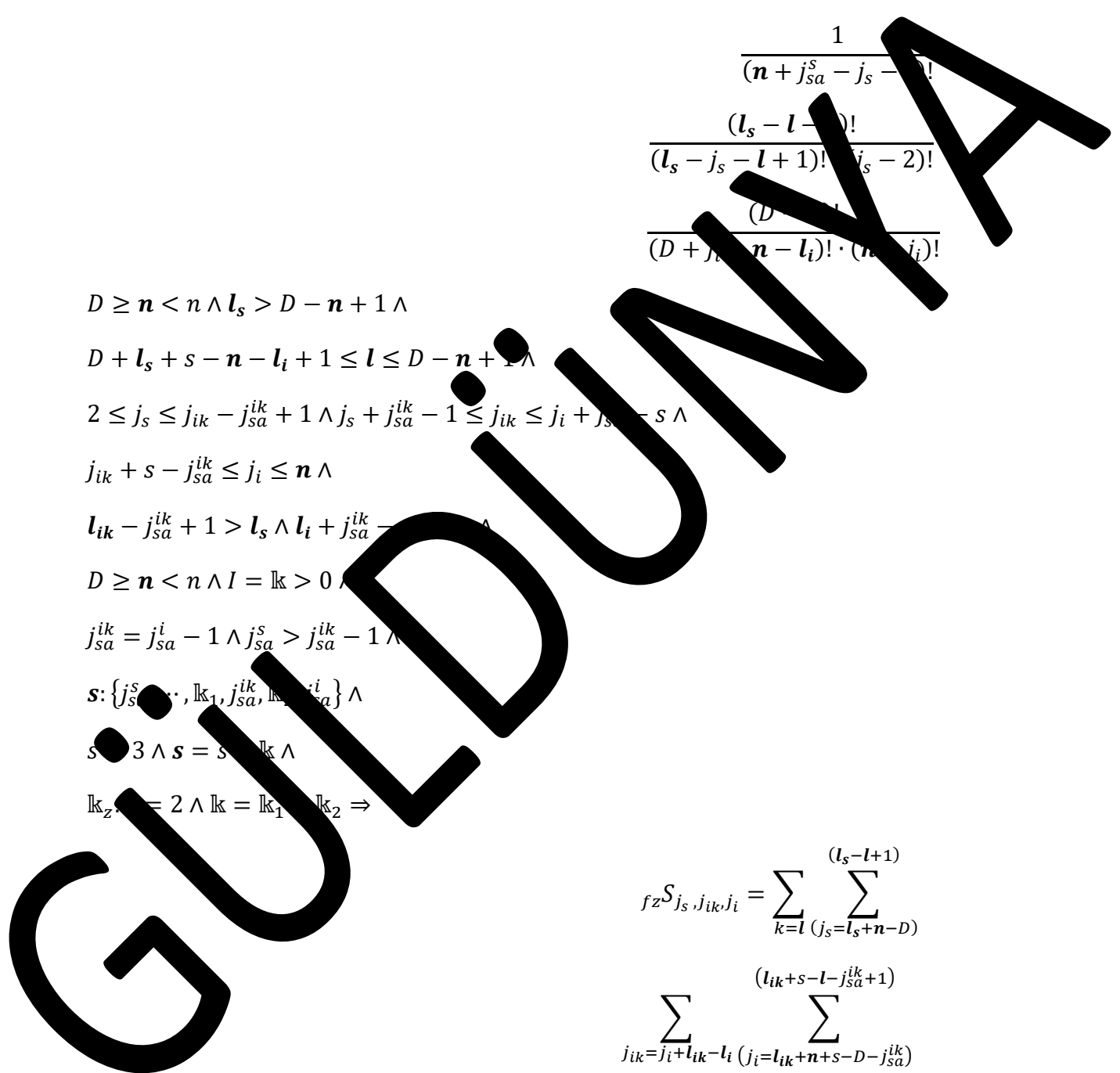
$s \geq 3 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}^{(l_{ik}+s-l-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$



$$\frac{\sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + \mathbf{n} - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_{ik}+\mathbf{n}+s-D-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{( )} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot$$

$$\frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_{z,s} j_{ik} j_i = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=0}^{j_{ik} - j_{sa}^{ik} - l} \sum_{j_s = j_{ik} - j_{sa}^{ik} - k}^{j_{ik} - l} \binom{j_{ik} - l}{j_{ik} - k - n - D} \binom{n_i - j_s + 1}{n_i = n + k} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}^{n_i} \binom{n_i - j_s + 1}{n_{is} = n + k - j_s + 1} \sum_{n_s = n_{ik} + j_{ik} - j_i - k_2}^{n_i} \frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$j_s \geq n - l \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$

$s > 3 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{l=1}^{( )} \sum_{(j_s=j_{ik}+l, n_s-l_{ik})} \dots$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_s - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\begin{aligned}
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=l_{ik}+s-l-j_{sa}^{ik}+s)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-1}^{n_{is}+j_s-j_{ik}} \sum_{(n_{is}+j_{ik}-i-k_2)}^{(n_{is}+j_{ik}-i-k_2)} \\
 & \sum_{(n_s=n-j_i+1)}^{(n_i-n_{ik}-1)!} \\
 & \frac{(j_s-2)! \cdot (n_{is}-j_s+1)!}{(n_{is}-n_{ik}-k_1-1)!} \\
 & \frac{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!}{(n_{is}-n_s-1)!} \\
 & \frac{(n_{ik}+j_{ik}-n_s-j_i)!}{(n_s-1)!} \\
 & \frac{(n_s+j_i-n-1)! \cdot (n-j_i)!}{(l_s-l-1)!} \\
 & \frac{(l_s-j_s-l+1)! \cdot (j_s-2)!}{(l_i+j_{sa}^{ik}-l_{ik}-s)!} \\
 & \frac{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!}{(D-l_i)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \sum_{(j_i=s+1)}^{( )} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - 1)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} - j_s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$l_i \leq D + s - n \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

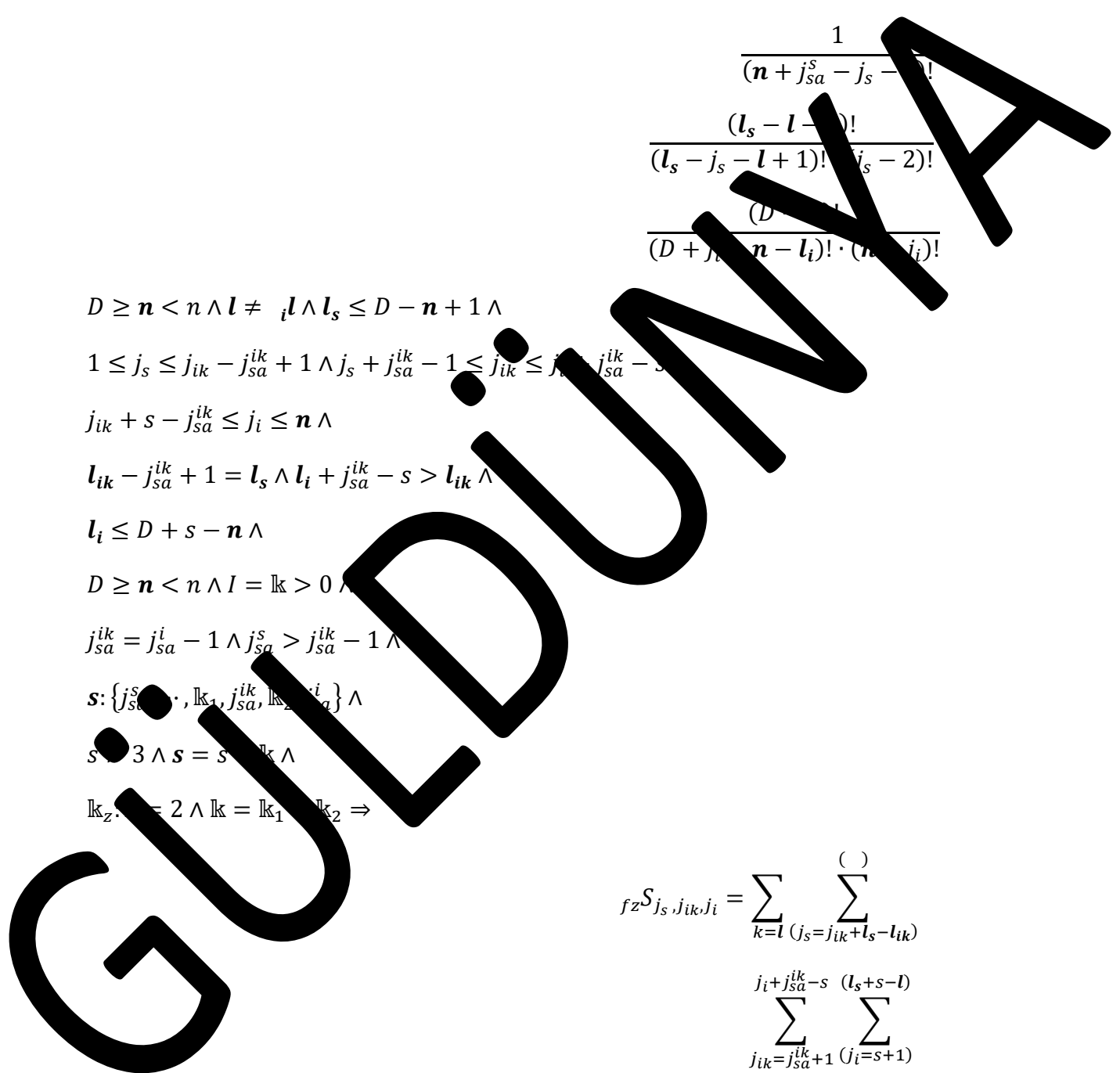
$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_z = 2 \wedge \mathbb{k} = \mathbb{k}_1 \vee \mathbb{k}_2 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \frac{j_i + j_{sa}^{ik} - s}{j_{ik} = j_{sa}^{ik} + 1} \frac{(l_s + s - l)}{(j_i = s + 1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$



$$\begin{aligned}
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - \mathbf{n} - 1)! \cdot (n - j_i)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - \mathbf{n} - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + \mathbf{n} - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}
 \end{aligned}$$

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$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{j_{ik}=j_i+l_{ik}}^{(l_s+l_{ik})} \sum_{j_i=s+1}^{(l_s+s-l)} \sum_{n_i=n+k}^n \sum_{(n_s=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-k_2)}^{( )} \frac{(n_{ik} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{n-l+1} \sum_{j_i=j_{ik}+s-j_{sa}^{ik}}^{n-l+1} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\ )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{i=n+l}^n \sum_{(n_{is}=n_{ik}+l_{ik}-l+1)}^{(n_{is}+1)}$$

$$\sum_{(\ )}^{(\ )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} - \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq l \wedge l_s \leq D - n - l + 1 \wedge$$

$$1 \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^s - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = j_{ik} + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + j_i - n \wedge$$

$$D > n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j_i} = \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j_{s_a}^{ik}+1}^{l_s+j_{s_a}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{s_a}^{ik})}^{(l_i-l+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{(n_i+j_s-j_{ik}-n+l_k-1)! \cdot (n_i+j_{ik}-n+l_k-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!}$$

$$\frac{(n_i-n_{is}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{(n_i-n_s-1)!}{(j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{s_a}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{s_a}^{ik}-j_{ik}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j_{s_a}^{ik}+1}^{l_s+j_{s_a}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{s_a}^{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} - j_s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$l_i \leq D + s - n \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} (n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 1)!}{(j_s - l_s - 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa} - j_{ik} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + \mathbf{n} - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^k+2)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_i=j_{ik}+s-j_{sa}^k)}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot$$

$$\frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z^S j_s, j_{ik}, j_i &= \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)} \\ &\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i - l + 1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i - j_s + 1)} \\ &\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{j_s - l + 1} \binom{j_s - l + 1}{k} \cdot \\
& \sum_{j_{ik} = j_{ik} - l_s + l_{ik} - l_s}^{j_{ik} - l_s + l_{ik} - l_s} \binom{j_{ik} - l_s + l_{ik} - l_s}{j_{ik} - l_s + l_{ik} - l_s} \cdot \\
& \sum_{n_i = n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \cdot \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1}^{(n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \cdot \\
& \frac{(n_s + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$



$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$

$s > 3 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{l=1}^{( )} \sum_{(j_s=j_{ik}+l, n_s-l_{ik})} \sum_{(l_{ik}+j_s+l+1)} \sum_{(j_{ik}=j_{sa}+1, i_i=l_i+n-D)} \sum_{(n_i+l_{ik}+1)} \sum_{(n_i+l_{ik}+1)} \sum_{(n_{is}+l_{ik}+1)} \sum_{(n_{is}+l_{ik}+1)} \sum_{(n_{ik}=l_{ik}-j_{ik}+1, n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\begin{aligned}
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=l_{ik}+s-l-j_{sa}^{ik}+s)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-1}^{n_{is}+j_s-j_{ik}} \sum_{(n_s=n-j_i+1)}^{(n_i+j_{ik}-l_{i-k_2})} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \cdot \\
 & \frac{(n_i-n_s-1)!}{(n_{ik}+j_{ik}-n_s-j_i)!} \cdot \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} -
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - \dots)!} \frac{(l_s - l - \dots)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(D - \dots)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} - j_s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$D + s - n < l_i \leq D + l_{ik} + s - j_{sa}^{ik} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

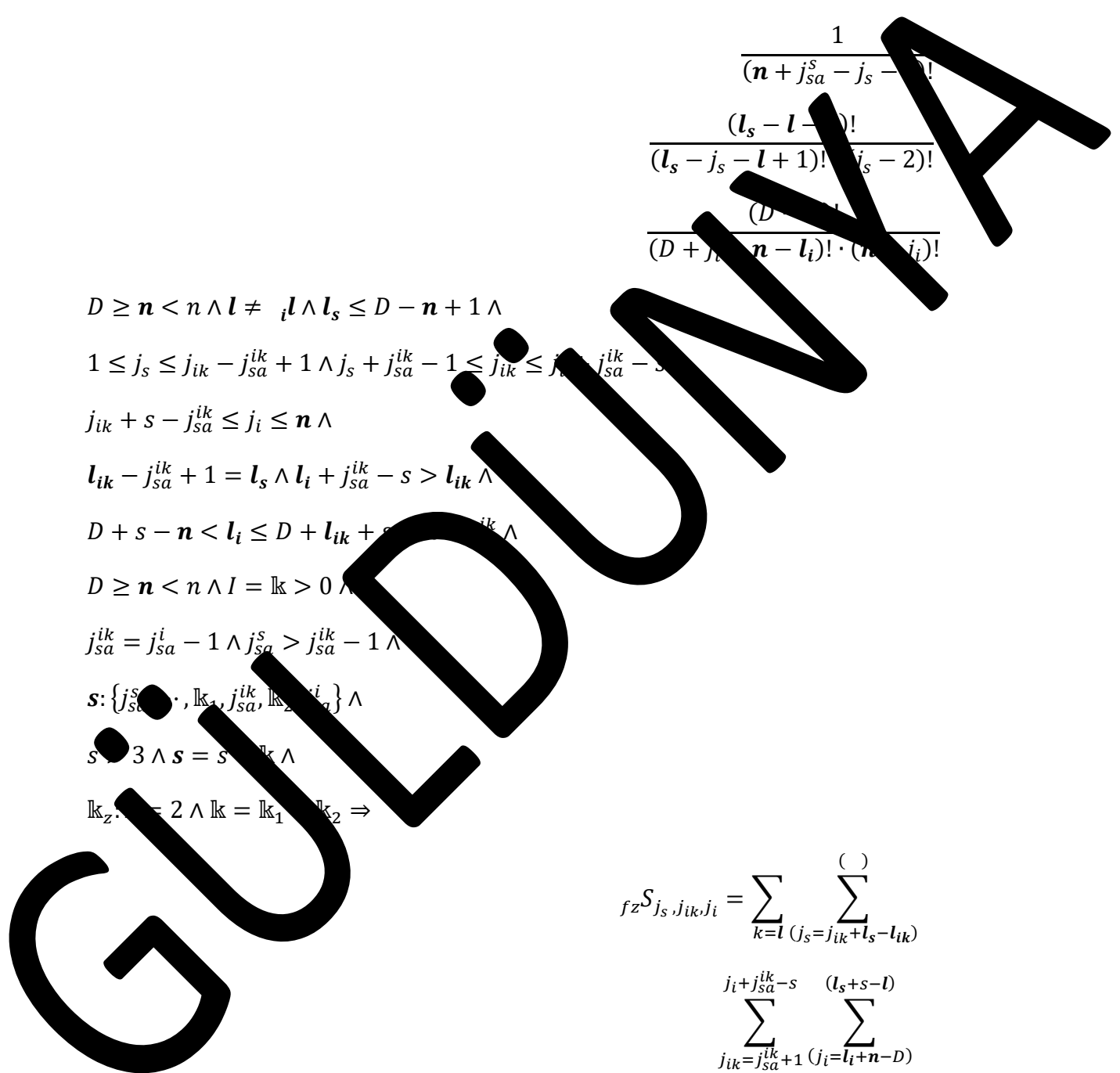
$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{(n_i-j_s+1)} \sum_{(j_i=l_i+n-D)}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$



$$\begin{aligned}
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + 1 - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} + \\
& \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
& \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}
\end{aligned}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{\substack{(\cdot) \\ j_{ik} = j_i + j_{sa}^{ik} - s}}^{\sum_{i=0}^{(l_s + s - l)}} \sum_{\substack{(\cdot) \\ (n_i = n + k)}}^{\sum_{i=0}^{(n_i - j_s + 1)}} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - k_2)}^{(\cdot)}$$

$$\frac{(n_{ik} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{n+l_s+l_{ik}-s-1} \sum_{j_i=l_i-l+1}^{n+l_s+l_{ik}-s-1} \sum_{j_{ik}=k+1}^{n+l_s+l_{ik}-s-1} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n_{ik}+1)}$$

$$\sum_{n_{ik}+k_2-j_{ik}}^{n_{is}+j_s-j_{ik}} \sum_{(n_{ik}+j_{ik}-j_i-k_1)}$$

$$\frac{(n_{is}-1)! \cdot (n_{is}-j_s+1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!}$$

$$\frac{(n_{is}-1-k_1-1)!}{(j_{ik}-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!}$$

$$\frac{(n_{ik}-n_s-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_1})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{ik} + s - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge I = l_{k_1} = 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^{ik} > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, \dots\} \wedge$$

$$s > 3 \wedge s \leq s + l_k \wedge$$

$$l_{k_2}: z \leq 2 \wedge l_k = l_{k_2} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$



$$\frac{\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

$$\frac{\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

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$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - n - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - n - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{l=1}^n \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{l_s=j_{sa}^{ik}-l}^{n+j_{sa}^{ik}-D-s} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz = j_{ik} j_i = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{(l_i-l+1)} \sum_{k=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}^{(n)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=l_i+l_{ik}-l_s}^{(l+1)} \sum_{(j_{sa}^{ik})}$$

$$(n_i - j_s + 1)$$

$$\sum_{(n_{ik} + k - j_s + 1)}$$

$$n_{is} + j_{ik} - k_1 \quad (n_{ik} - j_i - k_2)$$

$$\sum_{(n_{is} + k_2 - j_{ik})} \sum_{(n_s = n - j_i + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}$$

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$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+l_{k_2}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - 2 \cdot l_{k_2})!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - n - 2 \cdot l_{k_2} - j_{sa}^s)!} \cdot \frac{1}{(n_{is} - j_s - s)!} \cdot \frac{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}{(l_s - j_s - l)!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq n + 1$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik} - 1 \leq j_{ik} + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_{k_1} = l_s \wedge l_{ik} + j_{sa}^{ik} - s > l_{ik}$$

$$D + s - n < l_i \leq D + l_{ik} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = l_k > n \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - l_{k_1} \wedge j_{sa}^s > j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^i - l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = l_{k_1} + l_{k_2} \wedge$$

$$l_{k_1} \wedge l_{k_2} = l_{k_1} + l_{k_2} \Rightarrow$$

$$fz S_{j_s j_{ik} j_i} = \sum_{k=l} \sum_{(j_s=2)}^{(l_i+n-D-s)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_1})} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_s)}{(j_i-l_{k_1}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!} \cdot \\
 & \frac{(n_i-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_i+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_i - s)!}{(j_{ik} + l_i - 1)! \cdot (j_i + j_{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)} \\
 & \sum_{j_{ik} = j_s + l_{ik} - l_s} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

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$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z \mathcal{S}_{j_s, j_i} = \sum_{k=1}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik} - l + 1} \sum_{(j_i = l_i + n - D)}^{(l_i - l + 1)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$



$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=l}^{( )} \sum_{j_s=j_{ik}+l_{ik}}^{( )} \sum_{l_{ik}=j_{ik}+l_i-1}^{( )} \sum_{j_i=j_i+j_{sa}^{lk}-s}^{( )} \sum_{j_i=l_i+n-D}^{( )} \sum_{n_{is}=n+l_k}^{( )} \sum_{n_{is}=n+l_k-j_s+1}^{( )} \sum_{n_{is}=n+l_k-j_s+1}^{( )} \sum_{n_s=n_{ik}+j_{ik}-j_i-l_{k_2}}^{( )} \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + l_{k_1} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > l \wedge n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 - j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{ik} + s - n - j_{sa}^{ik} \wedge$$



$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+n-p)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-1}^{(\cdot)} \sum_{(n_{is}=n_{ik}+j_{ik}-j_i)}^{(\cdot)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + \dots + j_i + k_1 - \dots - j_i - s - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l = l \wedge l_s \leq D - n - 1 \wedge$

$D + l_s + s - n - l_i + \dots \leq l \leq l - 1$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} - 1 \wedge j_s + \dots \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + \dots \leq j_i \leq n$

$l_{ik} - j_{sa}^{ik} + \dots \leq l_s \wedge l_i + \dots - s > l_{ik} \wedge$

$D + \dots < l_i \leq D + l_s + s - n - 1 \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa}^{ik} - \dots - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$

$s > 3 \wedge s = s + k \wedge$

$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$

$$\begin{aligned}
 f_{Z^S} S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=2)} \\
 &\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=l_i+n-1)} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n+k_2-1}^{(n_i+j_{ik}-l_{ik_2})} \sum_{(n_s=n-j_i+1)} \\
 &\frac{(n_i - n_s - 1)!}{(j_s - 2)! \cdot (n_i - j_s + 1)!} \cdot \\
 &\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 &\frac{(n_i - n_s - 1)!}{(n_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 &\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 &\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 &\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)} \\
 &\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(\quad)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{(\cdot)}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - 1)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} - j_s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

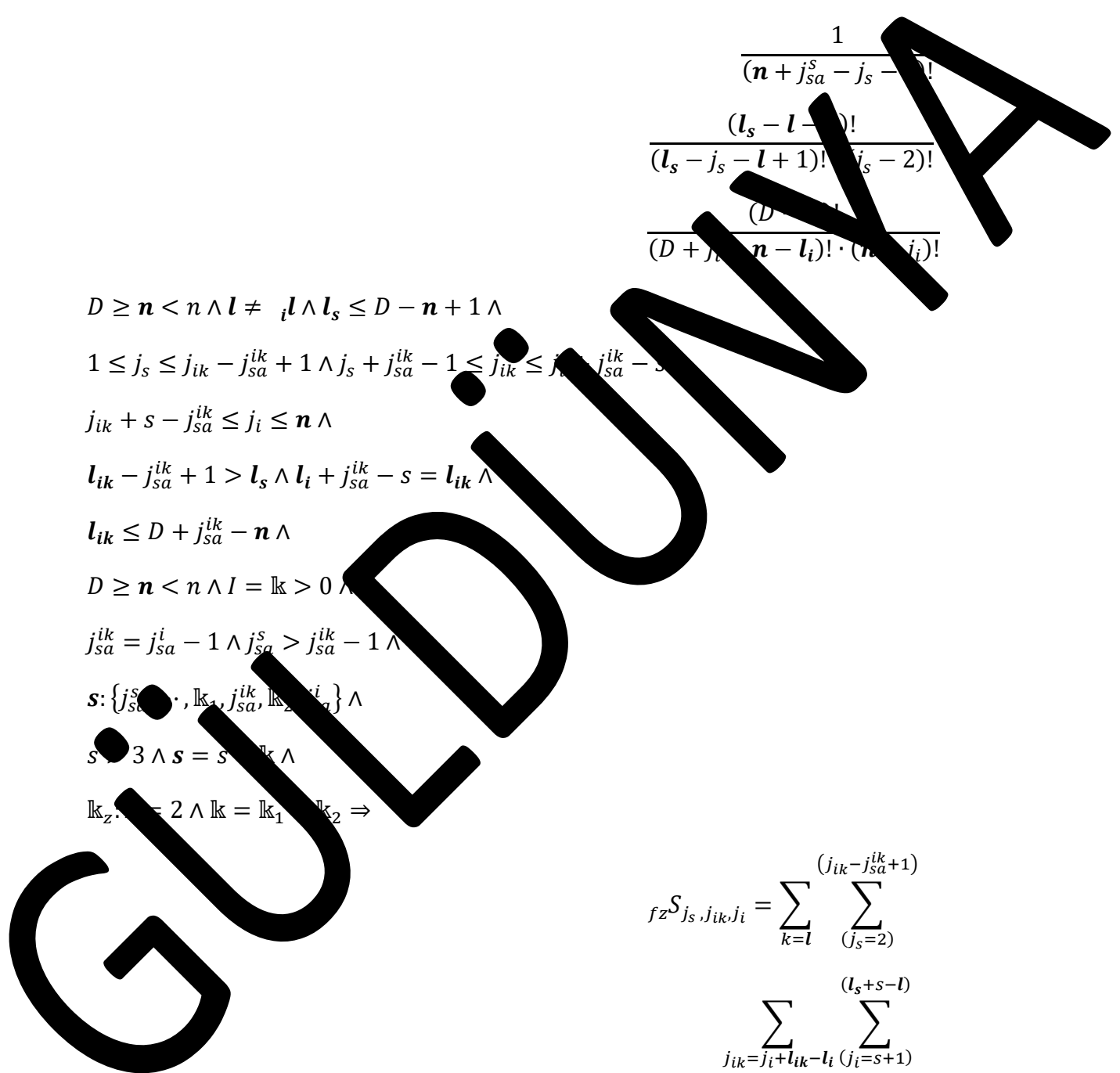
$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)} \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$



$$\begin{aligned}
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + 1 - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_i-l+1)} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}
 \end{aligned}$$

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$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{(n_i-j_s+1)} \sum_{n_i=n+l_k}^n \sum_{(n_s=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{(n_i-j_s+1)} \frac{(n_{ik} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}} = \sum_{l=1}^{k+1} \sum_{(j_s=2)}^{k+1} \sum_{j_{ik}^{k+1}}^{(j_i=j_{ik}+l-l_{ik})} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$



$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_s + j_{sa}^{ik} - l + 1}^{l_{ik} - l + 1} \sum_{(j_i = j_{ik} + l_i - l_{ik})}^{( )}$$

$$\sum_{i=n+l_k}^n \sum_{(n_{is}=n_{is}+1)}$$

$$\sum_{n_{is} + j_s - j_{ik} - l_{ik} + 1}^{(n_{ik} + j_{ik} - j_i - l_{ik})} \sum_{(n_{is} = j_i + 1)}$$

$$\frac{(n_{is} - l_{ik} - 1)! \cdot (n_{is} - j_s + 1)!}{(j_{ik} - l_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{ik})!}$$

$$\frac{(n_{is} - l_{ik} - 1)!}{(j_{ik} - l_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{ik})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + l_i - l_{ik})}^{( )}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_1})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!} \cdot$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge I = l_{k_1} = 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^{ik} > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, \dots\} \wedge$$

$$s > 3 \wedge s \leq s + l_k \wedge$$

$$l_{k_2}: z_{k_2} = 2 \wedge l_{k_2} = l_{k_2} \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\frac{\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(n_{ik} + l_{ik} - j_{sa}^{ik} + 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} - \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

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$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_{z^S}^{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)} \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_i+n-D)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(l_s - l)!}{(D + j_i - n - l_i)! \cdot (j_i - l_i)!} + \\
& \sum_{k=1}^{(l_s - l + 1)} \sum_{j_s=2}^{(l_s - l + 1 - k)} \sum_{i=j_i + l_{ik} - l_i}^{(l_i - l + 1)} \sum_{j_i=l_s + s - l + 1}^{(n_i - j_s + 1)} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik}=n+k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s=n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-)} \sum_{(l_i+n-D)}$$

$$\sum_{(n_{is}=n+lk)}^{(n_{is}=n+lk)} \sum_{(n_{is}=n+lk)}$$

$$\sum_{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} - lk_1 - n_s - j_i - s - 2 \cdot lk)!}{(n_{is} + n_{ik} + j_s + j_{ik} + lk_1 - n_s - j_i - n - 2 \cdot lk - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq l \wedge l_s \leq D - n - l_i \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - l_i < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$n > n < n \wedge l = lk > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, lk_1, j_{sa}^{ik}, lk_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + lk \wedge$$

$$lk_z: z = 2 \wedge lk = lk_1 + lk_2 \Rightarrow$$

$$\begin{aligned}
 f_{zS} S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)} \\
 &\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l)}^{( )} \\
 &\sum_{n_i=n+k}^n \sum_{(n_i=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n+k_2-j_{i_1}-1}^{n_i+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(j_{ik}-l_i-k_2)} \\
 &\frac{(n_s-n_{i_1}-1)!}{(j_s-2)! \cdot (n_{i_1}-j_s+1)!} \\
 &\frac{(n_{i_1}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{i_1}+j_s-n_{ik}-j_{ik}-k_1)!} \\
 &\frac{(n_s-n-1)!}{(n_s-j_i-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i)!} \\
 &\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 &\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 &\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 &\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 &\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)} \\
 &\sum_{j_{ik}=l_s+j_{sa}^{ik}-l-s+1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )} \\
 &\sum_{n_i=n+k}^n \sum_{(n_i=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{\sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 1)!}{(j_s - 1)! \cdot (l_s + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + \mathbf{n} - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=l_i+\mathbf{n}+j_{sa}^{lk}-D-s}^{l_s+j_{sa}^{lk}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\ )}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(\ )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot$$

$$\frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot$$

GÜLDÜZMÜŞA



$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-l-s+1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(l_i - l - 1)!}{(D + j_i - n - l_i)! \cdot (j_i - l)!} + \\
& \sum_{k=0}^{(l_s - l + 1)} \sum_{l_1=0}^{(D - s + 1)} \sum_{l_2=0}^{(l_i + j_i - l - s + 1)} \sum_{j_1=0}^{(j_i - l_1)} \sum_{j_2=0}^{(j_i - l_1 - j_1)} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_k-j_{ik}+1}^{(n_{is}+j_s-j_{ik}-l_k)} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_k)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - l_k - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_k)!} \cdot \\
& \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)}$$

$$\sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{(n - l_i - l_{ik})} \sum_{(j_{ik} + l_i - l_{ik})}$$

$$\sum_{k=1}^n \sum_{(n_{is} = n - l_i - l_{ik} + 1)}$$

( )

$$\frac{(n_{is} + n_{ik} + j_{ik} - l_{ik_1} - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^s - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > j_{ik} + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1 \wedge$$

$$D > n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_{z^S} S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)} \\
 &\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_{ik}+n+s-D-j_{ik})}^{(l_s+s-l)} \\
 &\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 &\sum_{n_{is}+j_s-j_{ik}-j_i}^{(n_{is}+j_s-j_{ik}-j_i+l_{ik}-l_i)} \sum_{(n_{is}+j_s-j_{ik}-j_i+l_{ik}-l_i)}^{(n_{is}+j_s-j_{ik}-j_i+l_{ik}-l_i)} \\
 &\sum_{n_{ik}=n+l_{k_2}-j_{ik}-1}^{(n_{ik}=n+l_{k_2}-j_{ik}-1)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)} \\
 &\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} + j_s - n_{ik} - j_i + 1)!} \\
 &\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \\
 &\frac{(n_{is} - n_s - 1)!}{(n_{is} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 &\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)} \\
 &\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \sum_{(j_i=l_s+s-l+1)}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \\
 &\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

GÜLDÜZYA

$$\frac{\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} (n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1 - 1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-k_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

GÜLDENREINER

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_s - l)!}{(D + j_i - n - l_i)! \cdot (j_i - l_i)!} + \\
 & \sum_{k=1}^{l_s - l + 1} \sum_{j_s=2}^{l_s - l + 1 - k} \sum_{j_i=1}^{l_{ik} + 1} \sum_{j_{ik}=j_{ik} + j_{sa}^{ik} - l + 1}^{l_{ik} + 1} \sum_{j_i=j_{ik} + l_i - l_{ik}}^{l_i} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
 \end{aligned}$$

GÜLDÜMNA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_{ik}+l_i-l_{ik})}^{(\cdot)} \sum_{n+l_k}^n \sum_{(n_{is}=n_{is}+l_k+1)}^{(n_{is}+1)} \sum_{(n_{ik}=n_{is}+l_{ik}-l_{k_1}-j_i-l_{k_2})}^{(\cdot)} \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq l \wedge l_s \leq D - n - 2 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^s - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n$$

$$l_{ik} - l_k + 1 > l_s - l + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1 \wedge$$

$$n \geq n - l_i \wedge I = l_k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + l_k \wedge$$



$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$\begin{aligned}
 f_z S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{(j_s=2)} \\
 &\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )} \\
 &\sum_{n_i=n}^n \sum_{(n_i=n-j_s+1)}^{(n-j_s+1)} \\
 &\sum_{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \\
 &\sum_{(j_{ik}-j_{ik}+1)}^{(n-j_i+1)} \\
 &\frac{(n_i - n_{is})}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 &\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 &\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 &\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 &\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)} \\
 &\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_{ik})!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(n_{is} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\quad)} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\quad)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{(\quad)} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{(\quad)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)} \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_i - l + 1)} \sum_{(j_i=l_i+n-D)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i - j_s + 1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$



$$D + l_s + s - n - l_i + 1 \leq l \leq l_i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, \dots, j_i} = \sum_{k=l}^{n-s-l+1} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_s} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{l-s+1} \binom{(\quad)}{(\quad)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\begin{aligned}
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{( )} \sum_{j_s=j_{ik}^{ik}+1}^{( )} \\
& \sum_{i=0}^{l_s+l} \sum_{j_{sa}^{lk}-D-i=j_{ik}+l_i-l_{ik}}^{l} \\
& \sum_{n_i=0}^{n} \sum_{n_{is}=n+l_k-j_s+1}^{l_i+l_k+1} \\
& \sum_{i=0}^{n_{is}+j_{ik}-l_k-l_{k_1}} \sum_{n_s=n_{ik}+j_{ik}-j_i-l_{k_2}}^{( )} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + l_k + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D + l_s + s - n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i \wedge l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$

$s > 3 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_s-l+1)} \sum_{j_s=2}^{(l_{ik+s-l})} \sum_{j_i=l_{ik}-l_i}^{(n+l_{ik}-l_i)} \sum_{n_i=l_{ik}-l_i}^{n} \sum_{n_{is}=n_{ik}-\mathbb{k}_1}^{n_{ik}+\mathbb{k}_2-j_{ik}+1} \sum_{n_{ik}=n_{ik}-j_{ik}+1}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

GÜLDÜMÜNKA

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_{ik}+n+s-D-j_{ik}^{ik})}^{(\cdot)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{ik}}^{(\cdot)} \sum_{(n_{ik}=n_{ik}+j_{ik}-j_i)}^{(\cdot)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_{ik} + \dots + l_{k_1} - j_i - s - l_k - j_{sa}^s)!}$$

$$\frac{1}{(j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq 1 \wedge l_s \leq D - n - 1 \wedge$$

$$D + l_s + s - \dots - l_i + \dots < l \leq l_i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} - 1 \wedge j_s + \dots \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - \dots \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_s \wedge l_{ik} - j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D - l_s - \dots < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^s - j_{sa}^s - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$l_{k_2}: z = 2 \wedge k = l_{k_1} + l_{k_2} \Rightarrow$$



$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}+1}^{n_{is}+j_s-j_{ik}} \sum_{(n_{ik}+j_{ik}-n_i-l_{k_2})}^{(n_{ik}+j_{ik}-n_i-l_{k_2})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(n_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

GÜLDÜNYA

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{(\cdot)}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - \dots)!} \frac{(l_s - l - \dots)!}{(l_s - j_s - l + 1)! \dots (j_s - 2)!} \frac{(D - \dots)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l = i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} - j_s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_z = 2 \wedge \mathbb{k} = \mathbb{k}_1 \vee \mathbb{k}_2 \Rightarrow$$

$$f_z^{S_{j_s, j_{ik}, j_i}} = \sum_{k=1}^n \sum_{i=1}^{\binom{(\cdot)}{j_s=1}}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=s)}^{(l_i-i+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_s=n-j_i+1}^{n_{ik}+j_{ik}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - 1)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} - 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (l_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$\sum_{j_i=1}^{( )} \sum_{j_{ik}=j_{sa}^{ik}}^{( )} \sum_{(j_i=s)}$$

$$\sum_{n_i=n+\mathbb{k}+1}^{( )} \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{( )} \sum_{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} + j_{ik} - \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{sa}^{ik} + \mathbb{k})! \cdot (n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq l_i < n \wedge l = l_i \wedge l_i \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge n_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s > j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=1}^n \sum_{(j_s=1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j_i=1)}^{( )} (l_i - l_{ik})$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2+1)}^{(n_i-j_{ik}-\mathbb{k}_1)} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}$$

$$\frac{(n_{ik} - n_s - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i)!}$$

$$\frac{(n_s - 1)!}{(n_s - j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^n \sum_{(j_s=1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{( )} \sum_{(j_i=s)}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{( )} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, \dots, j_i} = \sum_{k=l}^{(\cdot)} (j_s = j_{ik} - j_{sa}^{ik} + 1)$$

$$\sum_{j_i = j_{ik} + n - D}^{j_i + j_{sa}^{ik} - s} \sum_{(j_i = l_i + n - D)}^{(j_{ik} + s - l - j_{sa}^{ik} + 1)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = l_{ik} + n - D}^{l_{ik} - l + 1} \sum_{(j_i = l_{ik} - l + 2)}^{(l_i - 1)}$$

$$\sum_{(n_{ik} + l_{k_2} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{(n_{ik} + j_{ik} - l_{k_1})}^{(n_{is} + j_{ik} - l_{k_1})} \sum_{(j_i - l_{k_2})}^{(n_{ik} - j_i - l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

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$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \sum_{(j_i=l_i+n-D)}^{(n_i-j_s+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_i)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{(\quad)} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i) \cdot 2 \cdot \dots \cdot 1}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s) \cdot (n - 2) \cdot \dots \cdot (j_{sa}^s)!}$$

$$\frac{1}{(n + j_s - j_s - s)!}$$

$$\frac{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}{(j_s - l_i)!}$$

$$\frac{(D) \cdot (j_i - n - l_i)! \cdot (n - j_i)!}{(D)}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik} - 1 \leq j_{ik} = j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i < n \wedge$

$l_{ik} - j_{sa}^{ik} + \dots = l_s \wedge l_{ik} - j_{sa}^{ik} - s > l_{ik},$

$D \geq n < n \wedge l_s > 0 \wedge$

$j_{sa}^{ik} < j_i - 1 \wedge j_{sa}^s = j_i - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_s, \dots, \mathbb{k}_2, j_s^i\} \wedge$

$s > \dots = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \dots = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{\binom{()}{}} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{\binom{()}{}} \\
 & \sum_{j_{ik} = l_s + n + j_{sa}^{ik} - D - 1}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = l_s + s - l + 1)}^{(l_i - l + 1)} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_i - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - l_i - s)!} \cdot \\
 & \frac{(D - l_i)!}{(n - l_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \sum_{s=1}^l \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(\quad)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned} & \sum_{j_i = l_i + n - D - s - 1}^{l_i + n - k - D - s - 1} \sum_{j_{sa}^{ik} = l_{ik} + n - D}^{(l_i - l + 1)} \sum_{j_{sa}^{ik} = l_{ik} + n - D}^{(n_i - j_s + 1)} \\ & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\ & \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{s\bar{a}}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=l_i+n+j_{s\bar{a}}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{s\bar{a}}^{ik})}^{(l_i-l+1)}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_k+1)}^{(n_{is}+1)}$$

$$\sum_{n_{ik}+l_{k_2}-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_2}} \sum_{(j_i=j_{ik}+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_i-l_{k_2}-1)! \cdot (n_{is}-j_s+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_s-l_{k_2}-1)!}{(j_i-l_{k_2}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i-l_{k_2})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{s\bar{a}}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{s\bar{a}}^{ik}-j_{ik}-s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{s\bar{a}}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=l_i+n+j_{s\bar{a}}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{s\bar{a}}^{ik})}^{(\ )}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - \mathbb{k} + 1)! \cdot (j_s - \mathbb{k})!}{(D - j_i - n - \mathbb{k} - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in (j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i)$$

$$s > 1 \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-s-1}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}^{(\quad)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
& \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_{ik} - k_2)!} \\
& \frac{(n_s - n_{is} - 1)!}{(n_s + j_{is} - n - 1)! \cdot (n - j_i)!} \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
& \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa} - j_{ik} - s)!} \\
& \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
& \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_{sa}^{ik} = l_i}^{l_s + j_s - l} \sum_{j_{ik} = l_i}^{j_{sa}^{ik} - D - s} \sum_{j_i = j_{ik} + s - j_{sa}^{ik}}^{(n - j_s + 1)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_s = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(n_i - j_s + 1)} \\
& \frac{(n_{ik} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{j_s=l_{ik}+n-D}^{(l_i+n-s)} \sum_{j_{ik}=j_s+j_{sa}^{ik}}^{(l_i-l+1)} \sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{n_{is}=n+k-j_s+1}^{(n_i-n_{is}-1)!} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{(j_{ik}-k_1)} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\begin{aligned}
 & \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{(n_i-j_s+1)} \sum_{(n_s=n-j_i+l_{k_2})} \\
 & \frac{(n_i-n_{ik}+1)!}{(j_s-2)! \cdot (n_i-n_{ik}-j_s+1)!} \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{k_2}-1)!}{(j_i-j_{k_2}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i-l_{k_2})!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\quad)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$

$s > 2 \wedge s = s + \mathbb{k}$

$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$

$$fz_{j_s, j_{ik}, j_i}^S = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_i - s)!}{(j_{ik} + l_i - l - s)! \cdot (j_i + j_{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)}^{(l_s - l + 1)} \\
& \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{(l_i - l + 1)} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(l_i - l + 1)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=0}^{l-1} \sum_{j_s=l_i+n-k-s+1}^{n-l+1} \sum_{j_{ik}=j_s+j_{sa}^{ik}} \sum_{j_i=j_{ik}+s-j_{sa}^{ik}} \sum_{j_s=0}^{j_s+1} \sum_{n_{is}+k} (n_{is}=n+k-j_s+1) \sum_{k=n_{is}+j_s-k-k_1} \sum_{n_s=n_{ik}+j_{ik}-j_i-k_2} (n_{is}+n_{ik}+j_{ik}+k-k_1-n_s-j_i-s-2 \cdot k)! \cdot \frac{1}{(n+j_{sa}^s-j_s-s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D > n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\frac{(l_{ik}-l+1) \cdot (l_{ik}+1)}{j_{ik}+n-D \cdot (j_i=l_i+1)}$$

$$\sum_{n_i=n+\mathbb{k}_1}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=l_{ik}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

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$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l}^n \sum_{(n_i=n+l-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_i+s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+l-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - 2) \cdot \dots \cdot 1}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - n - 2) \cdot \dots \cdot (j_{sa}^s)!} \cdot \frac{1}{(n_{is} + j_s - j_s - s)!} \cdot \frac{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}{(l_s - l_i)!} \cdot \frac{1}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1$

$D + l_s + s - n - l_i + 1 \leq \dots \leq D - n + 1$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq \dots + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq \dots$

$l_{ik} - j_{sa}^{ik} + 1 = \dots \wedge l_i + j_{sa}^{ik} - s > \dots \wedge$

$D \geq \dots < n \wedge l = l_{k_1} + l_{k_2} \wedge$

$j_{sa}^{ik} < j_{sa}^i \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$

$s: \{j_{sa}^{ik}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$

$s > 3 \wedge s = \dots + l_{k_1} \wedge$

$\dots \wedge l_{k_1} = l_{k_1} + l_{k_2} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_1})} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-l_{k_2}-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_s-j_i-l_{k_2})!} \cdot \frac{(n_s-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_i+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \sum_{k=l}^{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_s - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - 1 = l \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

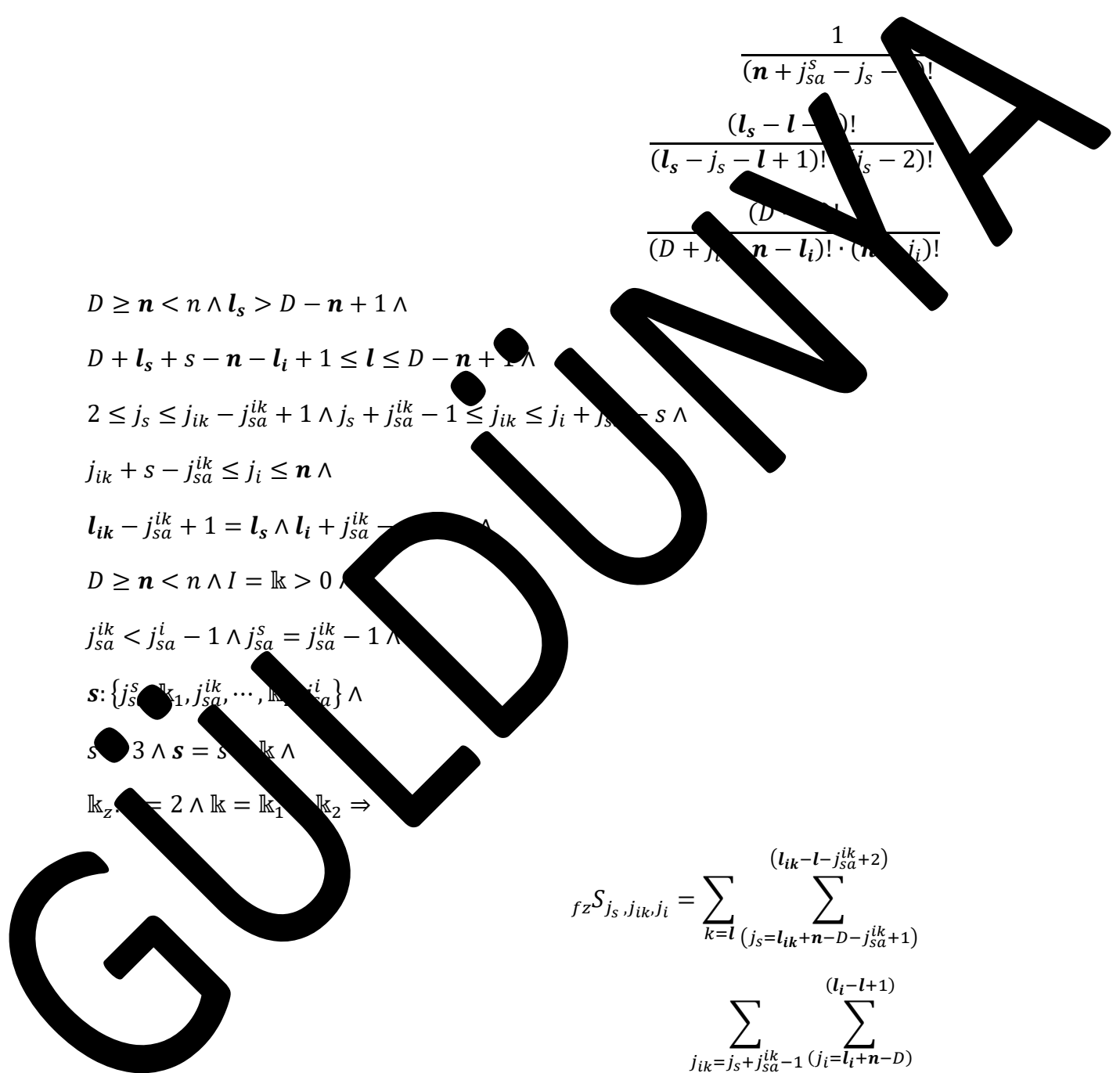
$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^{s-\mathbb{k}_1}, j_{sa}^{ik}, \dots, \mathbb{k}_1, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_z = 2 \wedge \mathbb{k} = \mathbb{k}_1 = \mathbb{k}_2 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^{(n_{is}=n+\mathbb{k}-j_s+1)}$$



$$\begin{aligned}
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - \mathbb{k}_2 - 1)!}{(n_s + j_s - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - \mathbb{k}_2 - 1)!}{(j_s - l_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + \mathbf{n} - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(\quad)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot
 \end{aligned}$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = j_i + j_{sa}^{ik} - s}^{(l_s + s - l)} \sum_{(j_i = l_i + n - D)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\begin{aligned}
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(l_s - l + 1)} \sum_{j_s=l_s+n-k}^{(l_s - l + 1)} \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_i - l + 1)} \sum_{n_i=n+k}^{(n_i - j_s + 1)} \sum_{n_{is}=n+k-j_s+1}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_i - j_{ik} - k_1} \sum_{n_s=n-j_i+1}^{(n_{ik} + j_{ik} - j_i - k_2)} \cdot \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+n-)}^{(\cdot)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_k}^{(\cdot)} \sum_{(n_{ik}+j_{ik}-j_i-)}^{(\cdot)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + \dots + j_{ik} + l_{k_1} - \dots - j_i - \dots - l_k - j_{sa}^s)!}$$

$$\frac{1}{+ j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i < n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$D \geq n < n \wedge l = l_k > \dots \wedge$

$j_{sa}^{ik} - j_{sa}^{ik} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, l_{k_1}, \dots, l_{k_2}, j_{sa}^i\} \wedge$

$s > \dots = s + l_k \wedge$

$l_{k_2}: z = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \binom{(\quad)}{\quad} \\
 & \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{\binom{n_i-1}{j_s-2} \binom{n_i-n_{is}}{n_i-n_{is}-j_s+1}}{(n_{is}-n_{ik}-1)!} \cdot \\
 & \frac{(j_{ik}-j_s-1)! \binom{n_{is}+j_s}{n_{is}+j_s} \binom{n_{ik}-j_{ik}}{n_{ik}-j_{ik}}}{(n_{ik}-j_s-k_2-1)!} \cdot \\
 & \frac{(n_{ik}-j_s-k_2-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_s-j_i-k_2)!} \cdot \\
 & \frac{(n_s-1)!}{\binom{n_s}{j_i-n-1}! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_i-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{j_s=l_s+n-D}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-l-s+1}^{l_i+j_{sa}^{ik}-l-s+1} \binom{(\quad)}{\quad} \\
 & \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-k_2)}
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\cdot)} \\
& \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(\cdot)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(\cdot)} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f^{z=1}(j_{ik}, j_i) = \sum_{k=l}^{n_i+n-D-s} \binom{n_i+n-D-s}{k}$$

$$j_{ik} = l_i + j_{sa}^{ik} - D - s \quad (j_i = j_{ik} + s - j_{sa}^{ik})$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=l_i+j_{sa}^{ik}-l-s+1}^{(l_i+j_{sa}^{ik}-l-s+1)}$$

$$\sum_{n_{ik}=n+l_k-j_{ik}-l-s+1}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_k-j_{ik}-l-s+1}^{(n_{ik}-j_{ik}-l-s+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - l_{k2} - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k2})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_s-j_i-\mathbb{k}_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - 2) \cdot (n - j_i - 2)!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2) \cdot (j_{sa}^s)!}$$

$$\frac{1}{(n - n_{is} - j_s - s)!}$$

$$\frac{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}{(l_s - j_s - l)!}$$

$$\frac{(j_i - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s - j_{sa}^{ik} - 1 \leq j_{ik} - j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{ik} - j_{sa}^{ik} - s = l_{ik}$$

$$D \geq n < n \wedge l_s - \mathbb{k}_2 > 0 \wedge$$

$$j_{sa}^{ik} \leq j_i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, \dots, \mathbb{k}_2, j_s^i\} \wedge$$

$$s > j_s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}^{(l_s+s-l)}$$



$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{i_k}=n+l_{k_2}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{i_k}+j_{i_k}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_s - l_{k_2} - 1)!}{(j_i - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_s - j_i - l_{k_2})!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)!} \cdot \\
 & \frac{(j_s - j_s - 1)! \cdot (j_s - 2)!}{(j_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - j_{s_a}^{i_k} + 1)!}{(j_{i_k} + l_{i_k} - j_{s_a}^{i_k})! \cdot (j_{i_k} - j_s - j_{s_a}^{i_k} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \\
 & \sum_{j_{i_k}=j_i+j_{s_a}^{i_k}-s}^{(l_{i_k}+s-l-j_{s_a}^{i_k}+1)} \sum_{(j_i=l_s+s-l+1)}^{(l_{i_k}+s-l-j_{s_a}^{i_k}+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{i_k}=n+l_{k_2}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{i_k}+j_{i_k}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot
 \end{aligned}$$

GÜLDÜMNA

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa} - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - j_{sa} - 1)! \cdot (j_{ik} - j_s - j_{sa} + 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{s=1}^n \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_s+l_{ik}-j_{ik}-l_s-j_{sa}^{ik}-s} (j_s+l_{ik}-j_{ik}-l_s-j_{sa}^{ik}-s)!$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned} & \sum_{j_s=2}^{j_{ik}-j_{sa}^{ik}+1} \sum_{j_i=j_{ik}+s-j_{sa}^{ik}}^{j_i+n-D} \sum_{l_s=l_{ik}-j_{sa}^{ik}+1}^{l_s} \sum_{l_i=l_{ik}+j_{sa}^{ik}-s}^{l_i} \\ & \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-k_2)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \end{aligned}$$

$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}^{(\quad)} \\
 & \sum_{j_{ik} = l_s + j_{sa}^{ik} - l + 1}^{l_{ik} - l + 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(\quad)} \\
 & \sum_{k=1}^n \sum_{(n_{is} = n - k + 1)}^{(n_{ik} + 1)} \\
 & \sum_{(n_{is} + j_s - j_{ik} = n_{ik} + j_{ik} - j_i - k_2)}^{(n_{ik} + j_{ik} - j_i - k_2)} \\
 & \sum_{(n_{ik} + k_2 - j_{ik} = n_{ik} - j_i + 1)}^{(n_{ik} - j_i + 1)} \\
 & \frac{\dots - n_{is} - 1)!}{(j_s - 2)! \cdot \dots - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{ik} - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} - \\
 & \sum_{k=l}^{(\quad)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)} \\
 & \sum_{j_{ik} = l_{ik} + n - D}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(\quad)}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} < l_i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: (j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i)$

$s > 1 \wedge s = s + \mathbb{k} \wedge$

$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_{ik} - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - n_{is} - 1)!}{(n_s + j_{ik} - \mathbf{n} - 1)! \cdot (n_s - n_{is})!} \cdot \\
& \frac{(l_s - l - 1)!}{(j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + l_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} + \\
& \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+\mathbf{n}-D-j_{sa}^{ik}+1)}^{(l_s-l+1)} \\
& \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
\end{aligned}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=l}^{(l_s-l+1)} \sum_{j_s=j_s+j_{sa}^{ik}-1}^{(j_s+j_{sa}^{ik}+1)} \sum_{n_i=n+l_k}^n \sum_{n_s=n+l_k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )} \frac{(n_{ik} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}} = \sum_{l=1}^n \sum_{(j_s=l_s+n-D)}^{(l_i-l+1)} \sum_{j_{ik}=l_i+n-D}^{(j_{sa}^{ik}-s)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$



$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-)} \sum_{(l_i+n-D)}$$

$$\sum_{n+l}^{(n_i+1)}$$

$$\sum_{(n_{is}=n_i+1)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} - n_s - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = D - n - 1 \wedge$$

$$D + j_s + s - n - l_i - 1 \leq l \leq D - n + 1 \wedge$$

$$j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j_i \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D > n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$n_{is}+j_s-j_{ik} \dots n_i+j_{ik}-j_i-l_k_2) \\ n_{ik}=n+l_k_2-1 \dots (n_s=n-j_i+1)$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_i - n_{ik} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - \dots - l_k_2 - 1)!}{(j_i - \dots - 1)! \cdot (n_i + j_{ik} - n_s - j_i - l_k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - 1)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_s - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - 1 > l_s \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^{s-\mathbb{k}_1}, j_{sa}^{ik}, \dots, \mathbb{k}_1, j_{sa}^i\} \wedge$

$s \geq 3 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}^{(l_{ik}+s-l-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - j_i - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - j_s - 1)!}{(j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_i - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + \mathbf{n} - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_{ik}+\mathbf{n}+s-D-j_{sa}^{ik})}^{(\ )} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(\ )} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot
 \end{aligned}$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = l_{ik} + n - D}^{l_{ik} - l + 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{()}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\begin{aligned}
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=0}^{j_s - j_{ik} - j_{sa}^{ik}} \sum_{l=0}^{j_s - j_{ik} - j_{sa}^{ik} - l} \binom{j_s - j_{ik} - j_{sa}^{ik} - l}{l} \cdot \\
& \sum_{j_{ik} = n - D + j_i + j_{sa}^{ik}}^{n - D + j_i + j_{sa}^{ik}} \binom{n - D + j_i + j_{sa}^{ik}}{j_{ik} + n - D} \cdot \\
& \sum_{n_i = n + \mathbb{k}}^{n} \sum_{n_i = n + \mathbb{k} - j_s + 1}^{(n_i - j_s + 1)} \binom{n_i - j_s + 1}{n_i = n + \mathbb{k} - j_s + 1} \cdot \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1}^{n} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{( )} \binom{( )}{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \cdot \\
& \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$n \geq n - 1 \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(l_s + n - D)}^{(j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{(j_i + \mathbb{k} - s)}^{(j_i + \mathbb{k} - s)} \sum_{(j_{ik} + n - D)}^{(j_{ik} + n - D)} \sum_{(j_i = l_i + \mathbb{k}_1)}^{(j_i = l_i + \mathbb{k}_1)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_i - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{is} + j_s - j_{ik} - \mathbb{k}_1}^{(n_{is} + j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\sum_{n_{ik} = j_{ik} - j_{ik} + 1}^{(n_{ik} = j_{ik} - j_{ik} + 1)} \sum_{(n_s = n - j_i + 1)}^{(n_s = n - j_i + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\begin{aligned}
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n_{ik}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2}^{n_{is}+j_s-j_{ik}} \sum_{(n_s=n-j_i)}^{(n_{ik}+j_{ik}-i-k_2)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{ik} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{ik} - k_2 - 1)!}{(j_i - k_2 - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+n-D)}^{( )}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_i+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} < j_i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s \in (j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i)$

$s > 1 \wedge s = s + \mathbb{k} \wedge$

$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_{ik} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - j_{ik} - 1)!}{(n_s + j_{ik} - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l_i - 1)!}{(j_s - l_i - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} - j_i - l_i)! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - \mathbf{n} - l_i)! \cdot (\mathbf{n} - j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+\mathbf{n}-D)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - j_{sa} - 1)!} \cdot \\
& \frac{(l_s + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa}^{ik} - l_{ik} - s)! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(\quad)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)} \\
& \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(\quad)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f^{z=2} = \sum_{k=l}^{l_i+n-D-s} \sum_{j_i=l_i+n-D}^{l_i+n-D-s}$$

$$\sum_{k=l_{ik}+n-D}^{l_{ik}-1} \sum_{j_i=l_i+n-D}^{(l_i-l+1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$



$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)}$$

$$\sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{(n)} \sum_{(j_{ik} + s - j_{sa}^{ik})}^{( )}$$

$$\sum_{n+kk}^{(n_i + 1)} \sum_{(n_{is} = n - 1)}$$

$$\sum_{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} - k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i = D - n - 1 \wedge$$

$$D + j_s + s - n - l_i - 1 \leq l \leq n - n + 1 \wedge$$

$$j_s \leq j_{sa}^{ik} - 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j_i \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned}
fzS_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \\
&\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \\
&\sum_{n_i=n+l_k}^n \sum_{(n_{is}=l_k-j_s+1)}^{(n_i-j_s+1)} \\
&\sum_{n_{ik}=n+l_{k_2}+1}^{n_{is}+j_s-j_{ik}} \sum_{(n_s=n-j_i)}^{(n_{ik}+j_{ik}-i-l_{k_2})} \\
&\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
&\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
&\frac{(n_{ik} - n_{ik} - l_{k_2} - 1)!}{(j_i - l_{k_2} - 1)! \cdot (n_{is} + j_{ik} - n_s - j_i - l_{k_2})!} \\
&\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
&\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
&\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
&\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \\
&\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
&\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
&\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+n-D)}^{( )}
\end{aligned}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_1})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!} \cdot$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = l_{k_1} = 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_i\} \wedge$$

$$s > 3 \wedge s \leq s + l_k \wedge$$

$$l_{k_2}: z \leq 2 \wedge l_k = l_{k_2} \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=s+1)}^{(l_{ik}+s-l-j_{sa}^{ik}+1)}$$



$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot$$

$$\frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{\binom{()}{}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=l_{ik}+s-l-j_{sa}^{ik}+2)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

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$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - n_s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - n_s)!} \cdot \\
 & \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{s=1}^n \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_{ik}+j_{sa}^{ik}-n_s} (j_s - j_{ik} - j_{sa}^{ik} + 1)! \cdot \\
 & \sum_{l_{ik}=j_i+j_{sa}^{ik}-s}^{l_{ik}+s-l-j_{sa}^{ik}+1} (l_{ik} + s - l - j_{sa}^{ik} + 1)! \cdot \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_s=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} (n_i - j_s + 1)! \cdot \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} (n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2) \cdot \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, \dots, j_i} = \sum_{k=l}^{( )} (j_s = j_{ik} - j_{sa}^{ik} + 1)$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}-s} \sum_{(j_i=s+1)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{(j_s = j_{sa}^{ik} + 1)}^{l_s + j_{sa}^{ik} - l} \binom{l+1}{(j_s - l + 1)}$$

$$\sum_{(j_s = j_{ik} - l_{k_1} - l_{k_2} + 1)}^{(n_i - j_s + 1)} \binom{n_i - j_s + 1}{(j_s - l + 1)}$$

$$\sum_{(j_s = j_{ik} - l_{k_1} - l_{k_2} + 1)}^{n_{is} + j_{ik} - l_{k_1} - l_{k_2}} \binom{n_{is} + j_{ik} - l_{k_1} - l_{k_2}}{(j_s - l + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - l + 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_s - l + 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_s - l + 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

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$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=s+1)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_i-j_{\mathbb{k}_2})}^{(\ )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - 2 \cdot \dots)!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \dots)! \cdot (j_{sa}^s)!}$$

$$\frac{1}{(n_{is} + j_s - j_s - s)!}$$

$$\frac{(l_s - \dots - l + 1)! \cdot (j_s - 2)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq \dots = n + 1$   
 $1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} = j_i + j_{sa}^{ik} - s \wedge$   
 $j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$   
 $l_{ik} - j_{sa}^{ik} + \dots = l_s \wedge l_{ik} + j_{sa}^{ik} - s > l_{ik}$   
 $l_i \leq D + s - n$   
 $D \geq \dots < n \wedge l = \mathbb{k} > \dots \wedge$   
 $j_{sa}^{ik} < j_{sa}^i \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$   
 $s: \{j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$   
 $s > 3 \wedge s = \dots + \mathbb{k} \wedge$   
 $\dots \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-l_{k_2}-1)!}{(j_i-j_{ik}-l_{k_2})! \cdot (n_{ik}+j_{ik}-n_s-j_i-l_{k_2})!} \cdot \frac{(n_i-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_i+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{( )} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}
 \end{aligned}$$

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$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\}$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z \cdot 2 \wedge \mathbb{k} = \mathbb{k}_1 \wedge \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\cdot)}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(l_i - l + 1)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_i - s)!}{(j_{ik} + l_i - \mathbb{k}_1 - 1)! \cdot (j_i + j_{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\cdot)} \\
& \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(\cdot)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(\cdot)} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$



$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\sum_{\substack{j_s, j_{ik}, j_i \\ \neq l}} \sum_{\substack{l_{ik} \\ j_{sa}^{ik}+2}} \sum_{\substack{j_{ik} \\ j_s=2}} \sum_{\substack{l_i-l+1 \\ j_{ik}=j_s+j_{sa}^{ik}-1}} \sum_{\substack{j_i \\ j_i=j_{ik}+s-j_{sa}^{ik}}} \sum_{\substack{n \\ n_i=n+k}} \sum_{\substack{n_i-j_s+1 \\ n_i=n+k-j_s+1}} \sum_{\substack{n_i+j_s-j_{ik}-k_1 \\ n_{ik}=n+k_2-j_{ik}+1}} \sum_{\substack{n_{ik}+j_{ik}-j_i-k_2 \\ n_s=n-j_i+1}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l-l-j_{sa}^{ik}+2)}$$

$$\sum_{i=j_s+j_{sa}^{ik}-1}^{j_{ik}+s-j_{sa}^{ik}}$$

$$\sum_{n_i+l_k}^{n_i+l_k+(n_i+n+l_k-j_s+1)}$$

$$\sum_{n_i+j_{ik}-l_{k_1}}^{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + l_k + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > l \wedge n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

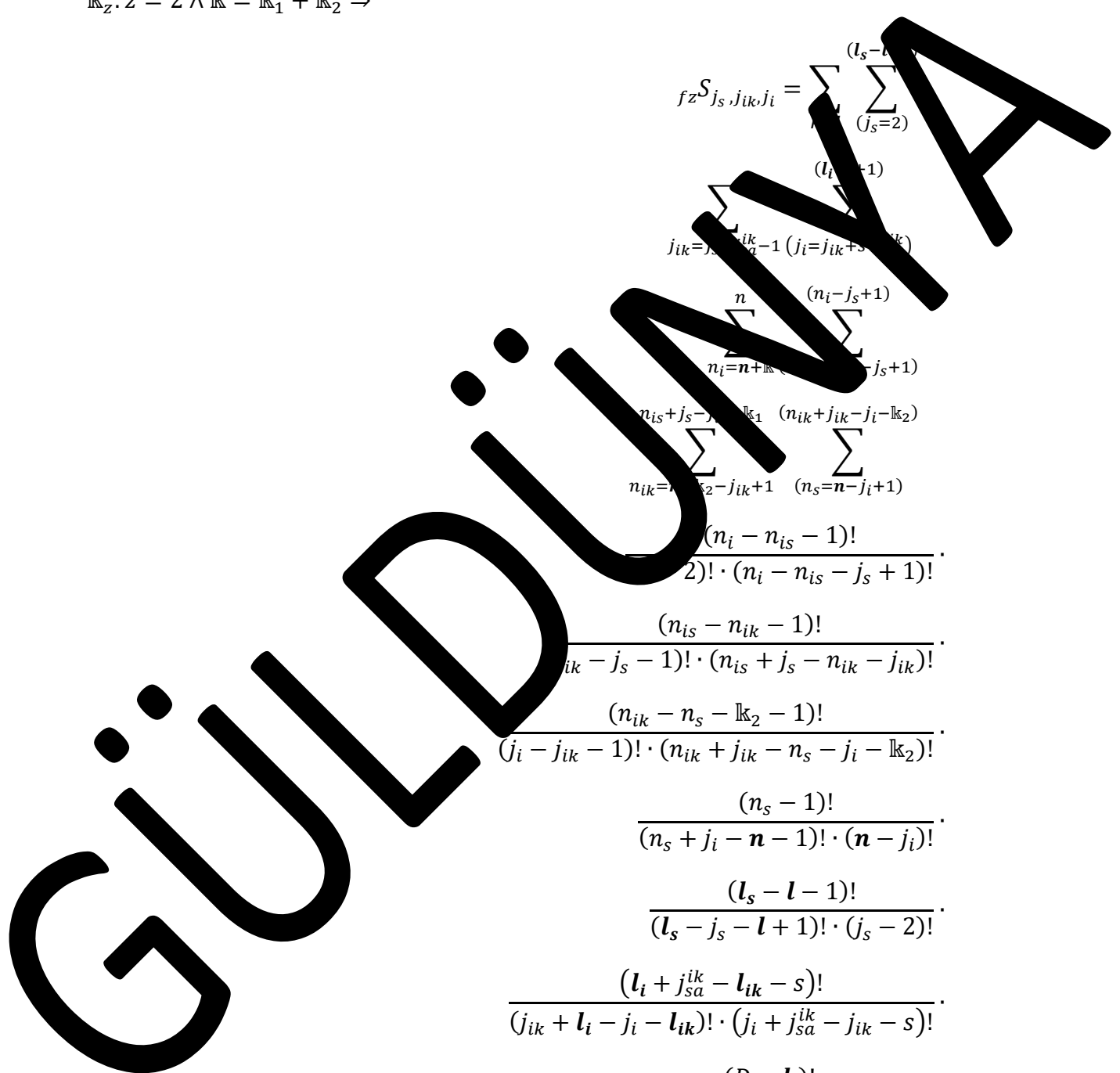
$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{(j_s=2)}^{(l_s-l)} \sum_{(l_i=l+1)}^{(l_i-l+1)} \sum_{n_i=n+\mathbb{k}_1}^n \sum_{n_{is}=n+\mathbb{k}_1-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \sum_{(n_s=n-j_i+1)}^{(n_i-n_{is}-1)!} \frac{(n_i - n_{is} - 1)!}{2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$



$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(n)} \sum_{n_i=n+l_k}^n \sum_{(n_s=n+l_k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+l_{k_1}-j_i-l_{k_2})}^{(n)} \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - 2) \cdot (n - j_i - l_{k_2})!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2})! \cdot (n - j_i - l_{k_2})!} \cdot \frac{1}{(n_{is} - j_s - s)!} \cdot \frac{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}{(l_s - j_s - l)!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq n + 1$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_s + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_{k_1} = l_s \wedge l_{ik} - j_{sa}^{ik} - s > l_{k_2}$$

$$D + s - n < l_i \leq D + l_s + n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 1 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = l + k \wedge$$

$$l \wedge k = l_{k_1} + l_{k_2} \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(n)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{ik}-l_{k_2}-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_s-j_i-l_{k_2})!} \cdot \frac{(n_s-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_i+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=l_{ik}+s-l-j_{sa}^{ik}+2)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_i - s)!}{(j_{ik} + l_i - \mathbb{k}_1 - 1)! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\cdot)} \\
 & \sum_{j_{ik} = j_i + j_{sa}^{ik} - s}^{(l_{ik} + s - l - j_{sa}^{ik} + 1)} \sum_{(j_i = l_i + n - D)}^{(\cdot)} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1}^{(\cdot)} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(\cdot)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

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$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{ik} + s - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_i+j_{sa}^{ik}-s} \sum_{j_{ik}=j_{sa}^{ik}+1}^{(l_s+s-l)} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\begin{aligned}
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{(j_s - l)} \sum_{j_s = j_{ik} + j_{sa}^{ik} + 1}^{(j_s - l + k)} \frac{(j_s - l - k)!}{(j_s - l - k)! \cdot (j_s - l - k)!} \cdot \\
& \sum_{j_{ik} = j_{sa}^{ik}}^{j_{sa}^{ik} - l} \sum_{j_i = l_s + s - l + 1}^{(j_i - l_{ik} - k)} \frac{(j_i - l_{ik} - k)!}{(j_i - l_{ik} - k)! \cdot (j_i - l_{ik} - k)!} \cdot \\
& \sum_{n_i = l_i - k}^{l_i} \sum_{n_{is} = n + k - j_s + 1}^{(n_i - l_{ik} - k)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \sum_{n_{ik} = k_2 - j_{ik} + 1}^{n_{is} - j_{ik} - k_1} \sum_{(n_{ik} + j_{ik} - j_i - k_2)}^{(n_{ik} - n_s - k_2 - 1)!} \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
\end{aligned}$$



$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+n-1)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_k}^{(\cdot)} \sum_{(n_{ik}+j_{ik}-j_i)}^{(\cdot)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + \dots + j_{ik} + l_{k_1} - \dots - j_i - \dots - l_k - j_{sa}^s)!}$$

$$\frac{1}{+ j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq 1 \wedge l_s \leq D - n - 1 \wedge$$

$$1 < j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i - n \wedge$$

$$l_{ik} - j_s + 1 = l_s \wedge l_i - j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n - 1 \leq D + \dots + s - n - 1 \wedge$$

$$D > n \wedge I = l_k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + l_k \wedge$$

$$l_{k_2}: z = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

$$fz_{j_s, j_{ik}, j_i}^S = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j_i=l_i+n-)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}-l+1}^{\Delta} \sum_{(n_s=n-j_i+l)}^{\Delta} \sum_{(n_s=n-j_i+l)}^{(n_s-n_{ik}-1)!}$$

$$\frac{(n_s-n_{ik}-1)!}{(j_s-2)! \cdot (n_s-n_{ik}-j_s+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{ik}-l_{k_2}-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i-l_{k_2})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

GÜLDÜZYAN

GÜLDEN

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - j_i - n - \mathbb{k}_2 - 1)!}{(n_s - j_i - n - \mathbb{k}_2 - 1)!} \cdot \\
 & \frac{(n_s - j_s - 1)! \cdot (j_s - 2)!}{(n_s - j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - \mathbb{k}_2)! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot
 \end{aligned}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{ik} + s - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\cdot)} \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_i + n + j_{sa}^{ik} - D - s - 1} \sum_{(j_i = l_i + n - D)}^{(l_i - l + 1)} \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_i - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - s)!} \cdot \\
 & \frac{(l_i - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{j_s=l}^{j_s=j_{ik}-j_{sa}^{ik}+1} \sum_{j_i=n+j_{sa}^{ik}-D-s}^{j_i=j_{ik}+s-j_{sa}^{ik}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

GÜLDÜMÜN

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_i+n_{ik}-j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{(n_i-j_s+1)} \sum_{(n_{ik}+l_k-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_{ik}-l_{k_1}} \sum_{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_i - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_i - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l \leq D - n + 1 \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$j_{sa}^{ik} - j_{sa}^{ik} = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$s > 3 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$\begin{aligned}
 f_z^S j_s j_{ik} j_i &= \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{(l_i+n-D-s)} \\
 &\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=n-D)}^{(l_i-l+1)} \\
 &\sum_{n_{ik}=\mathbb{k}+(n_{is}=\mathbb{n}+\mathbb{k}-j_{ik}-1)}^{(n_i-l+1)} \\
 &\sum_{n_{ik}=\mathbb{k}_2-j_{ik}+1}^{(j_i+l-1)} \sum_{(j_i+1)}^{(j_i+l-1)} \\
 &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 &\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 &\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - \mathbb{k} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 &\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-l-j_{sa}^{ik}+2)} \\
 &\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}^{(n_i-j_s+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{( )} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot
 \end{aligned}$$

GÜLDÜZMAYA



$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{ik} + s - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{(l_i-l+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}^{(n)} \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (j_i)!} + \\
 & \sum_{k=0}^{(l_s - l + 1)} \sum_{l=0}^{(D - s + 1)} \sum_{j=0}^{(l_i - l + 1)} \sum_{j_i = j_{ik} + s - j_{sa}^{ik}}^{j_s + j_{sa}^{ik} - 1} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot
 \end{aligned}$$

GÜLDÜM YA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)}$$

$$\sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{(j_i - l_k + s - j_{sa}^{ik})}$$

$$\sum_{k=1}^n \sum_{(n_{is} = n - l_i + 1)}$$

$$\sum_{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} - l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i = l \wedge l_s = D - n - l + 1 \wedge$$

$$D + l_i + s - n - l_i - 1 \leq l \leq l_i - 1 \wedge$$

$$1 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j_i \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i + s - 1 < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = l > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{s_a}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{s_a}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{(n_i-n+1)}^{(n_i-n+1)}$$

$$\sum_{(n_{ik}+k)}^{(n_{ik}+k)}$$

$$\sum_{(n_{ik}-j_{ik}-k_1)}^{(n_{ik}-j_{ik}-k_1)}$$

$$\sum_{(n_{ik}-j_i-k_2)}^{(n_{ik}-j_i-k_2)}$$

$$\sum_{(n_{ik}=j_{s_a}^{ik}-j_{ik}+1)}^{(n_{ik}=j_{s_a}^{ik}-j_{ik}+1)}$$

$$\frac{(n_{ik} - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{ik} - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - n_{ik} - 1)!}{(j_{ik} - j_i - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - \mathbb{k} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{s_a}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{s_a}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{s_a}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=l_i+n+j_{s_a}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{s_a}^{ik})}^{(\quad)}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_k)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq i \wedge l - 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + l_i - 1 \leq j_i \leq j_i - j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$D + s - n - l_i \leq D - l_{ik} + s - n - j_{sa}^{ik}$

$D \geq n < n \wedge l_{k_1} > 0 \wedge$

$j_{sa}^{ik} \leq l_i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, l_{k_1}, \dots, l_{k_2}, j_s^i\} \wedge$

$s > 0 \wedge s = s + l_{k_1}$

$l_{k_z}: z = 2 \wedge l_{k_z} = l_{k_1} + l_{k_2} \Rightarrow$

$$f_z^S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\begin{aligned}
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{( )} \\
 & \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{( )} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot
 \end{aligned}$$

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$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - l_i \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_{zS}^{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{(j_s=2)} \sum_{j_{ik}=j_s + j_{sa}^{ik} - 1}^{(l_i - l + 1)} \sum_{(j_i=l_i + n - D)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i - j_s + 1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_i - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(n - l_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=0}^{(j_s - 2)} \sum_{i_s = l_i + n - D - s + 1}^{(j_s - k + 2)} \\
 & \sum_{i_k = j_s + j_{sa}^{ik} - 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{( )} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$



$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz = \sum_{k=l}^{j_{ik} - j_{sa}^{ik} + 1} \sum_{(j_s=2)}^{(l_s + s - l)} \sum_{j_{ik} = j_i + j_{sa}^{ik} - s}^{(j_i = s + 1)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = 2)}$$

$$\sum_{j_{ik} = j_i + j_{sa}^{ik}}^{(l_s - l + 1)}$$

$$\sum_{n + k}^{(n_i - j_s + 1)} \sum_{(n_i + k - j_s + 1)}$$

$$\sum_{n_i + k_2 - j_{ik}}^{(n_i - j_{ik} - k_1)} \sum_{(n_i - j_{ik} - k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{( )}$$

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$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=s+1)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_s-j_i-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbb{k}_2 - 2) \cdot \dots \cdot 1}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbb{k}_2 - 1) \cdot \dots \cdot (j_{sa}^s)!}$$

$$\frac{1}{(n_{is} + j_s - j_s - s)!}$$

$$\frac{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}{(l_s - j_s - l)! \cdot (j_s - 1)!}$$

$$\frac{(j_s - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq n + 1$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} = j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + s > l_s \wedge l_{ik} + j_{sa}^{ik} - s = l_{ik}$$

$$l_{ik} \leq D + j_{sa}^{ik} - s$$

$$D \geq n < n \wedge l = \mathbb{k} > 1 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = \mathbb{k} + \mathbb{k} \wedge$$

$$s = \mathbb{k} \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_i)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-l_{k_2}-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_s-j_i-l_{k_2})!} \cdot \frac{(n_s-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_i-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{( )}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(\quad)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\quad)} \\
& \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(\quad)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_{zS}^{j_s, n, j_i} = \sum_{k=l}^{s-l+1} \sum_{(j_s=2)}^{(s-l+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{k-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(l_s - l + 1)} \sum_{j_s=2}^{(j_s - 1)}$$

$$\sum_{j_{ik}=j_s + j_{sa}^{ik}}^{(j_{ik} - j_s - j_{sa}^{ik})} \sum_{j_i=j_{ik} + s - j_{sa}^{ik}}^{(j_i - j_{ik} - s + j_{sa}^{ik})}$$

$$\sum_{j_s=1}^{(j_s - 1)} \sum_{n_{is}=n + k - j_s + 1}^{(n_{is} - n + k - j_s + 1)}$$

$$\sum_{k=n_{is} + j_s - k - k_1}^{(k - k_1)} \sum_{(n_s = n_{ik} + j_{ik} - j_i - k_2)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + k + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_i + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

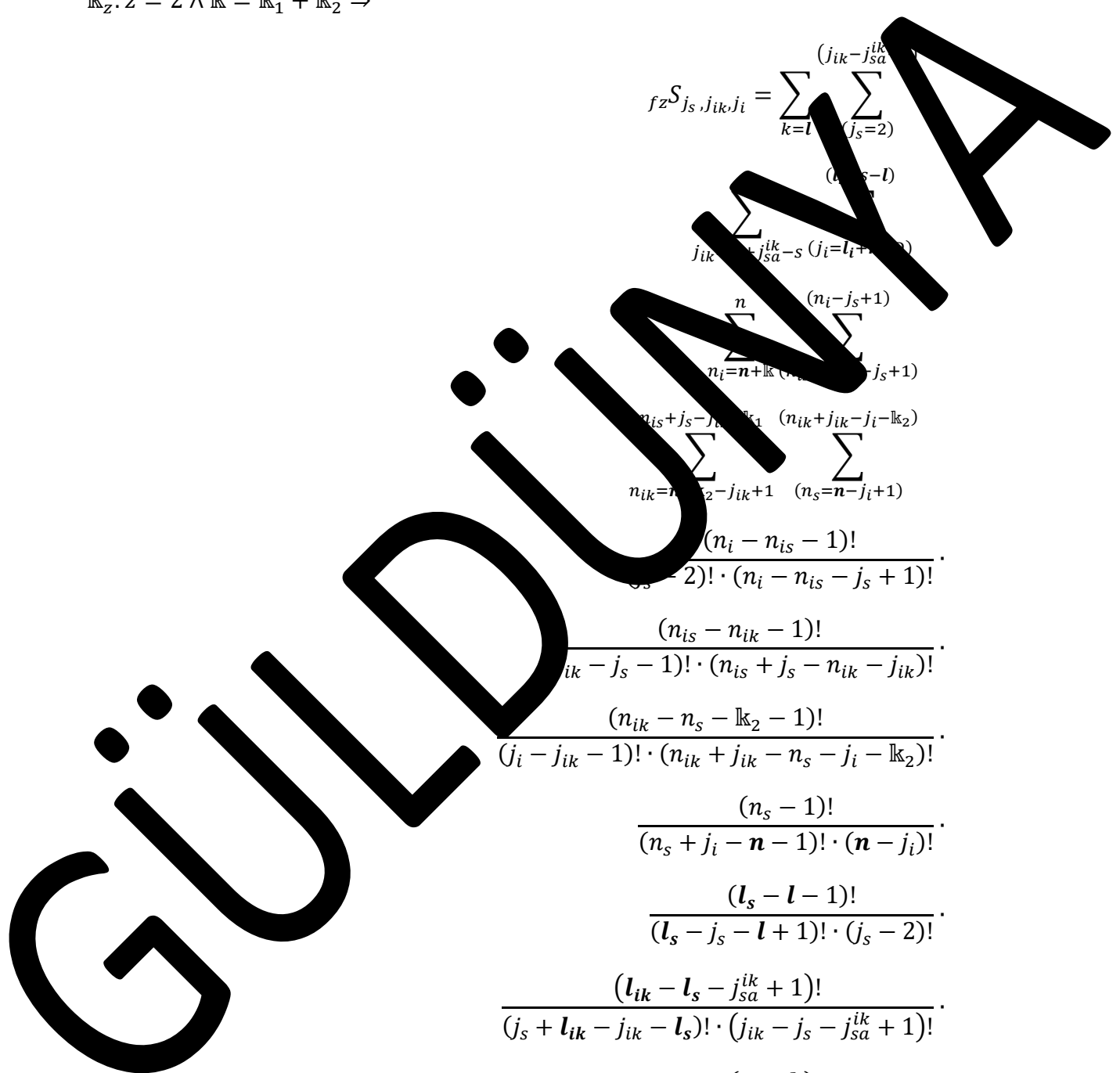
$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik})} \sum_{(j_s=2)}^{(l_s-l)} \sum_{(l_s-l)}^{(l_s-l)} \sum_{(j_i=l_i+1)}^{(n)} \sum_{(n_i=n+\mathbb{k})}^{(n_i-j_s+1)} \sum_{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \sum_{(n_{ik}=l_{ik_2}-j_{ik}+1)}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$





$$\begin{aligned}
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_i)!(n_{is}+j_{ik}-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{ik}-l_{k_2})!}{(j_i-j_{ik}-l_{k_2})! \cdot (n_{ik}+j_{ik}-n_s-j_i-l_{k_2})!} \cdot \frac{(n_i-1)!}{(n_s)!(j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \\
 & \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}
 \end{aligned}$$

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$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\}$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z \cdot 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = 2)}^{(l_s - l + 1)} \\
 & \sum_{j_{ik} = l_s + j_{sa}^{ik} - l + 1}^{n_i + j_{sa}^{ik} - l - s + 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{j_s=j_{ik}+j_{sa}^{ik}+1}$$

$$\sum_{j_s+l}^{l_s+l} \sum_{n+j_{sa}^{ik}-D-j_{ik}+j_{sa}^{ik}}^{j_{ik}+s-j_{sa}^{ik}}$$

$$\sum_{n_l}^n \sum_{n_{i_s}+l_k}^{l_i+l_k+1} (n_{i_s}=n+l_k-j_s+1)$$

$$\sum_{n_{i_s}+j_{sa}^{ik}-l_k-l_{k_1}}^{( )} \sum_{n_s=n_{i_k}+j_{ik}-j_i-l_{k_2}}$$

$$\frac{(n_{i_s} + n_{i_k} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_{k_2})!}{(n_{i_s} + n_{i_k} + j_s + l_{k_2} + l_{k_1} - n_s - j_i - n - 2 \cdot l_{k_2} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S j_s j_{ik} j_i = \sum_{k=l}^{(l_i+n-D)} \sum_{(j_s=2)}^{(l_i+n-D)}$$

$$l_i + j_{sa}^{ik} - l - s + 1$$

$$j_{ik} = l_i + n + j_s - D - s \quad (j_i = j_{ik} + s - \mathbb{k})$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\sum_{n_{ik}=l_i-\mathbb{k}_2-j_{ik}+1} \sum_{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_i+j_{sa}^{ik}-l-s+1} \binom{(\quad)}{j_i=j_{ik}+s-j_{sa}^{ik}} \\
 & \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{n_s=n_{ik}+j_{ik}-j_i-l_{k_2}}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{\binom{n_i-1}{j_s-2} \binom{n_i-n_{is}-1}{(n_i-n_{is}-1)!}}{\binom{n_{is}-n_{ik}-1}{(j_{ik}-j_s-2)!} \binom{n_{is}+j_s-n_{ik}-j_{ik}}{(n_{is}+j_s-n_{ik}-j_{ik})!}} \\
 & \frac{\binom{n_{ik}-l_{k_2}-1}{(j_i-j_{ik}-1)!} \binom{n_{ik}-j_{ik}-n_s-j_i-l_{k_2}}{(n_{ik}-j_{ik}-n_s-j_i-l_{k_2})!}}{\binom{n_s-1}{(n_s-1)!} \binom{n_i-1}{(n_i-1)!} \cdot \binom{n-j_i}{(n-j_i)!}} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_i+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \binom{(\quad)}{j_i=j_{ik}+s-j_{sa}^{ik}} \\
 & \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{n_s=n_{ik}+j_{ik}-j_i-l_{k_2}}^{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}
 \end{aligned}$$

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$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\}$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z \cdot 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_i + j_{sa}^{ik} - s}^{(l_s + s - l)} \sum_{(j_i = l_{ik} + n + s - D - j_{sa}^{ik})}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_s - 1)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = 2)} \\
 & \sum_{j_{ik} = j_i + j_{sa}^{ik} - s}^{(l_{ik} + s - l - j_{sa}^{ik} + 1)} \sum_{(j_i = l_s + s - l + 1)} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=l}^{( )} \sum_{j_s=j_{sa}^{ik}+1}^{( )} \sum_{j_i=j_{sa}^{ik}-s}^{( )} \sum_{j_{ik}=n+s-D-j_{sa}^{ik}}^{( )} \sum_{j_{is}=j_{sa}^{ik}+1}^{( )} \sum_{n_{is}=n+l_k-j_s+1}^{( )} \sum_{n_s=n_{ik}+j_{ik}-j_i-l_{k_2}}^{( )} \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + l_k + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > l_s \wedge n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik})} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik})} \sum_{j_i=l}^{l+j_s^{ik}} \sum_{j_{ik}=l}^{n-D} (j_i=j_{ik}+s-1) \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_2-j_{ik}+1}^{n_{ik}+j_{ik}-j_i-\mathbb{k}_2} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(j_s=2)}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-l_{k_2}-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i-l_{k_2})!} \cdot \frac{(n_i-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_i+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \\
 & \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\}$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_{ik} + n - D - j_{sa}^{ik})} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l - 1)!}{(l_s - j_i - l + 1)! \cdot (l - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_{ik} + n - D - j_{sa}^{ik} + 1)}^{(l_s - l + 1)} \\
& \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{l_{ik} - l + 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{( )} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
\end{aligned}$$



$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S j_s, j_{ik}, j_i = \sum_{k=l}^{(l_s-l+1)} \sum_{j_s=2} \sum_{j_{ik}=j_i+j_s} \sum_{j_i=l_i+n-D} \sum_{n_{is}=n+\mathbb{k}-j_s+1} \sum_{n_{ik}=n_2-j_{ik}+1} \sum_{n_{ik}=n_2-j_{ik}+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+n-)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_k}^{( )} \sum_{(n_{ik}=n_{is}+j_{ik}-j_i-)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + \dots + j_{ik} + l_{k1} - \dots - j_i - \dots - l_k - j_{sa}^s)!} \cdot \frac{1}{(j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq 1 \wedge l_s \leq D - n - 1 \wedge$$

$$D + l_s + s - \dots - l_i + \dots \leq l \leq l_i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} - 1 \wedge j_s + \dots \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - \dots \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 \leq l_s \wedge l_{ik} - j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D - \dots < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^s - j_{sa}^s - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$



$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n-k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-1}^{n_{is}+j_s-j_{ik}} \sum_{(n_s=n-j_i-k_2)}^{n_i+j_{ik}-j_i-k_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{ik} - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{is} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_k)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - n)!}$$

$$\frac{(D - n)!}{(D - j_i - n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i \wedge l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + l_i - 1 \leq j_i \leq j_{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l \wedge l_i + j_{sa}^{ik} - s \leq l_{ik} \wedge$$

$$D + s - n < l_i \leq D - l_s + s - n - 1$$

$$D \geq n < n \wedge l > l_k > 0$$

$$j_{sa}^{ik} \leq i - 1 \wedge j_{sa}^s = j_{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, \dots, l_{k_2}, j_s^i\} \wedge$$

$$s > 2 \wedge s = s + 1$$

$$l_{k_z}: z = 2 \wedge l_{k_z} = l_{k_1} + l_{k_2} \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}^{(l_{ik}+s-l-j_{sa}^{ik}+1)}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(n_{ik} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(n_i-j_s+1)} \\
& \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\cdot)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\cdot)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{(\cdot)} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(\cdot)} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot
\end{aligned}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - l_i \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - l_s + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{\infty} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{j_{ik}+n-D-j_{sa}^{ik}+1} \sum_{j_i=j_{ik}+s-j_{sa}^{ik}}^{( )} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$((D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n) \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k}_1$$

$$\mathbb{k}_1 z = 2 \wedge \mathbb{k}_1 = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=s+1)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_i - l + 1)! \cdot (l_s - j_i - l - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{j_s=2}^{(l_s - l + 1)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{j_i=l_s+s-l+1}^{(l_i-l+1)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot
 \end{aligned}$$

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$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{(j_i - j_{ik} + 1)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} (j_i=s+1)$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_s + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_{k_2})!}{(n_{ik} + n_{is} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_{k_2} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$((D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$



$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n) \vee$$

$$(D \geq n < n \wedge l \neq l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}^{(j_i - l + 1)}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(l_i - l + 1)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} - 1)!}{(j_s + l_{ik} - j_{ik} - l_{sa})! \cdot (j_{ik} - j_s - j_{sa} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa}^{ik} - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = 2)} \\
 & \sum_{j_{ik} = l_s + j_{sa}^{ik} - l + 1}^{l_{ik} - l + 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(l_i - l + 1)} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

GÜLDÜZÜM

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_s = j_{ik} - j_{sa}^{ik} + 1}^{j_{ik} - l}$$

$$\sum_{j_i = j_{ik} + s - j_{sa}^{ik}}^{j_{ik} - l}$$

$$\sum_{n_i = n + k}^n \sum_{(n_s = n + k - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - k_2)}$$

$$\frac{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$1 \leq n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l + 1)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{sa}^{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{s-l+1} \sum_{(j_s=2)}^{(j_s=2)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(j_i=j_{ik}+s-j_{sa}^{ik})} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \sum_{(j_s=2)}^{(j_s=2)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$((D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2$$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l + 1)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - 1)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{sa}^{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{l-1} \sum_{(j_s=2)}^{l-1} \\
& \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=l_s+j_s-l+1)}^{(l_i-l+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{(j_s)}$$

$$\sum_{j_i=j_i+j_{sa}^{ik}}^{(j_i)}$$

$$\sum_{n_i=n+l-k}^n \sum_{n_{is}=n+l-k-j_s+1}^{(n_{is})}$$

$$\sum_{n_{is}=n+l-k-k_1}^{(n_{is})} \sum_{n_s=n_{ik}+j_{ik}-j_i-k_2}^{(n_s)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + k + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$(n \geq n \wedge n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$



$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$(D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz = \sum_{k=l}^{j_{ik} - j_{sa}^{ik} + 1} \sum_{(j_s=2)}^{(l_i - l + 1)} \sum_{i_k = l_{ik} + n - D}^{l_s + j_{sa}^{ik}} \sum_{(j_i = l_i + n - D)}^{(n - j_s + 1)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{s=2}^{(n - k)}$$

$$\sum_{l_i = l_s - l + 1}^{(n - l_s + 1)} \sum_{(n_i + j_{sa}^{ik} - l_i - j_{ik} = j_{ik} + s - j_{sa}^{ik})}$$

$$\sum_{n_i = l_i - k}^{(n - l_i + 1)} \sum_{(n_{is} = n + k - j_s + 1)}$$

$$\sum_{n_{is} = j_{ik} - k_1}^{(n_i + j_{ik} - j_i - k_2)} \sum_{(n_{ik} = k_2 - j_{ik} + 1)} \sum_{(n_s = n - j_i + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{n+l_k}^{(n_i+l_k+1)} \sum_{(n_s=n+l_k+1)}$$

$$\sum_{(j_i=j_{ik}-l_k)}^{(\ )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - n_s - \dots - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_{ik} + l_{k1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$(D \geq n < n \wedge l_i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n \leq l_i \leq D + l_s + s - n - 1) \vee$$

$$(D < n \wedge l_i \neq l_s \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S j_s^{j_{ik}, j_i} \sum_{k=l}^{(l_i - D - s)} \frac{(l_i - D - s)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\begin{aligned}
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)}^{(l_s - l + 1)} \\
& \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{l_{ik} - l + 1} \sum_{(j_{ik} = j_s - j_{sa}^{ik})}^{(l_i - l + 1)} \\
& \sum_{n + k}^n \sum_{(n_{is} = n_{ik} + 1)}^{(n_{is} + 1)} \\
& \sum_{n_{ik} + k_2 - j_{ik}}^{n_{is} + j_s - j_{ik}} \sum_{(n_{ik} + j_{ik} - j_i - k_2)}^{(n_{ik} + j_{ik} - j_i - k_2)} \\
& \frac{(n_{is} - 1)! \cdot (n_{is} - j_s + 1)!}{(n_{is} - 2)! \cdot (n_{is} - j_s + 1)!} \\
& \frac{(n_{is} - n_{ik} - 1)!}{(n_{is} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
& \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} - \\
& \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)}^{(l_s - l + 1)}
\end{aligned}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{is}=n+l-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{sa}^{ik}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - 2) \cdot (n - 2)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - n - 2)! \cdot (j_{sa}^{ik})!} \cdot \frac{1}{(n - j_s - j_s - s)!} \cdot \frac{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}{(l_s - l)!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$((D \geq n < n \wedge l \neq i, l \wedge l_i \leq D - n + 1) \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i, l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} - 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} \leq j_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq i, l \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i, l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S j_s, j_{ik}, j_i = \sum_{j_s=2}^{(l_s-1)} \sum_{j_{ik}=j_s-1}^{(l_{ik}-l+1)} \sum_{j_i=j_{ik}+n-D}^{(n-j_s+1)} \sum_{n_i=n-j_s+1}^{(n_i-j_s+1)} \sum_{n_{is}=j_s-1}^{n_{is}+j_s-1-\mathbb{k}_1} \sum_{n_{ik}=\mathbb{k}_2-j_{ik}+1}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \sum_{(n_s=n-j_i+1)}^{(n_i-n_{is}-1)!} \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_s-\mathbb{k}_2-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i-\mathbb{k}_2)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j_i=j_{ik}+s-j_{ik}^s)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-1}^{( )} \sum_{(n_{is}=n_{ik}+j_{ik}-j_{ik}^s)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + \dots + j_i + l_{k_1} - \dots - j_i - s - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n_{is} + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l = l_s \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} + j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i \wedge j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D > n \wedge l = l_k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s \in \{1, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + l_k \wedge$$

$$l_{k_2}: z = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$



$$\begin{aligned}
 f_{z^S} S_{j_s, j_{ik}, j_i} &= \sum_{k=1}^l \sum_{(j_s=1)}^{(\quad)} \\
 &\quad \sum_{j_{ik}=j_{sa}^{ik}}^{(l_i - l + 1)} \sum_{(j_i=s)}^{(\quad)} \\
 &\quad \sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{n_s=n_{ik}+j_{ik}-j_i-k_2}^{n_{ik}+j_{ik}-j_i-k_1} \\
 &\quad \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - 1)!} \cdot \\
 &\quad \frac{(n_s - n_s - k_2 - 1)!}{(n_i - j_{ik} - 1)! \cdot (n_{ik} - n_s - j_i - k_2)!} \cdot \\
 &\quad \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 &\quad \frac{(n_i + j_{sa}^{ik} - l_{ik} - s)!}{(l_i + 1 - j_i - l_{ik})! \cdot (j_i - s)!} \cdot \\
 &\quad \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 &\quad \sum_{k=1}^l \sum_{(j_s=1)}^{(\quad)} \\
 &\quad \sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j_i=s)}^{(\quad)} \\
 &\quad \sum_{n_i=n+k}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1+1)}^{(\quad)} \sum_{n_s=n_{ik}+j_{ik}-j_i-k_2}^{(\quad)} \\
 &\quad \frac{(n_i + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_i + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)! \cdot (n - s)!} \cdot \\
 &\quad \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
 \end{aligned}$$

$D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$S_{j_s, j_{ik}, j_i} = \sum_{k=1}^{( )} \sum_{l=1}^{( )} \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_i-l+1)} \sum_{j_i=s}^{(l_i-l+1)}$$

$$\sum_{l_i=n+\mathbb{k}}^n \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_s=n-j_i+1}^{n_{ik}+j_{ik}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{l=1}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_i=s)}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{( )} \sum_{n_s=n_{ik}+j_{ik}-j_i} \frac{(n_i + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s) \cdot (n - s)!} \cdot \frac{(D - l_i)}{(D + s - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l = j_l \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik}$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$

$s > 3 \wedge s = s + \mathbb{k}$

$\mathbb{k}_2 \cdot z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=1}^l \sum_{(j_s=1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_s=n-j_i+1}^{n_{ik}+j_{ik}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^n \binom{()}{l}$$

$$\sum_{j_{ik}=j_{sa}}^n \binom{()}{j_i=s}$$

$$\sum_{n_i=n-\mathbb{k}}^n \binom{()}{n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1} \sum_{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i + n_{ik} + j_{ik} + \mathbb{k}_1 - n - s - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$(D \geq n < n \wedge l = l \wedge l_i \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \vee$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l = l \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n) \vee$$

$$(D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{k=1}^{(j_s, j_{ik}, j_i)} \sum_{l=1}^{(j_s=1)} \sum_{j_{ik}=j_{sa}^{ik}}^{(l_i - l + 1)} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{n_s=n-j_i+1}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{(j_i=1)}^{(\cdot)}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{(\cdot)} \sum_{(n_s=n_{ik}-j_i-l_{k_2})}^{(\cdot)}$$

$$\frac{(n_i + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - l_i)!}{(n_i + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} > l_{ik}$$

$$D \geq n < n \wedge l = l_{k_1} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik} - 1, j_{sa}^{ik}, \dots, l_{k_2}\} \wedge$$

$$s > 3 \wedge s = s + 1 \wedge$$

$$l_{k_2}: 2 \leq l_{k_2} \wedge l_{k_2} = l_{k_1} + l_{k_2} \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_{ik}+s-l-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{is}=n+l-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_{ik} - k_2)!} \cdot \\
 & \frac{(n_s - j_i - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - j_s - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=l_{ik}+s-l-j_{sa}^{ik}+2)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
 \end{aligned}$$

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$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_i = l_i + l_{ik}}^{(n - l_i - j_{ik} - l_{ik})}$$

$$\sum_{j_i = l_i + n - D}^{(l_{ik} + s - l - j_{sa}^{ik} + 1)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_s + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_s + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$



$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{j_s} \sum_{(j_s=j_{ik})}^{(l_{ik})} \sum_{(l_s+s-l)}^{(j_i+j_{sa}^{ik})} \sum_{(n_D)}^{(n_s+n+l)} \sum_{(n_i-j_s+1)}^{(n_i+n+l)} \sum_{(n_i+n+l)}^{(n_i+n+l-j_s+1)} \sum_{(n_{is}+j_{ik}-\mathbb{k}_1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \sum_{(n_{ik}=n+l_2-j_{ik}+1)}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\begin{aligned}
 & \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_s+s-l+ )}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2- }^{n_{is}+j_s-j_{ik}} \sum_{(n_{ik_2}=n+k_2- )}^{(n_i+j_{ik}-l_{ik_2})} \\
 & \frac{(n_i-n_{ik_2}-1)!}{(j_s-2)! \cdot (n_{is}-n_{ik_2}-j_s+1)!} \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{ik_2}-l_{ik_2}-1)!}{(j_i-j_{ik_2}-1)! \cdot (n_{is}+j_{ik}-n_s-j_i-l_{ik_2})!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$

$s > 2 \wedge s = s + \mathbb{k}$

$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$

$$fzS_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{\binom{()}{j_i=l_i+n-D}}^{(l_i-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{is}=n+\mathbb{k}-j_s+1}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n-j_i+1}}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_i - s)!}{(j_{ik} + l_i - l - s)! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{( )} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{( )} \\
 & \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_{ik} - l + 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(l_i - l + 1)} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik} - l_{ik})}^{( )}$$

$$\sum_{l_i+n+j_{sa}^{ik}-D}^{l_{ik}+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_{is}+k}^{(j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{( )}$$

$$\sum_{k=n_{is}+j_s-k-k_1}^{( )} \sum_{(n_s=n_{ik}+j_{ik}-j_i-k_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + k + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_i + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-s-1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j_i=l_i-l+1)}^{(l_i-l+1)}$$

$$\sum_{(j_i=n-D)}^{(j_i=n-D)}$$

$$\sum_{(n_i-j_s)}^{(n_i-j_s)}$$

$$\sum_{(n_i=n+k)}^{(n_i=n+k-j_s+1)}$$

$$\sum_{(n_i=n+k_1)}^{(n_i=n+k_1-j_i-k_2)}$$

$$\sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{(n_{ik}+j_{ik}-j_i-l_{k_1})} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-1-l_{k_2}-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_s-j_i-l_{k_2})!} \cdot \frac{(n_s-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_i+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{\binom{()}{}} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{\binom{()}{}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{\binom{()}{}}
 \end{aligned}$$

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$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_i-l+1)} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(j_i=l_i+n-D)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$



$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - n_s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - n_s)!} \cdot \\
 & \frac{(l_i - l)!}{(n - l)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=0}^{l_i - l + 2} \sum_{i=l_i + n - D - s + 1}^{n - k} \\
 & \sum_{k=j_s + l_{ik} - l_s}^{l_i - l + 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

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$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=i+l_{ik}-l_s} \sum_{(j_{sa}^{ik})}$$

$$\sum_{(n_i-j_s+1)} \sum_{(n_{ik}+l_{ik}-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}} \sum_{(j_{ik}-l_{k_1})} \sum_{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_{ik} - j_i - s - 2 \cdot l_{k_2})!}{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_{ik} - j_i - n - 2 \cdot l_{k_2} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n \wedge l_s > D - l_i + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - l_{k_1} + l_{k_2} \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - l_{k_1} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_{k_1} = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = l_{k_1} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + l_{k_1} \wedge$$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz \mathcal{S}_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}$$

$$\sum_{n_i=1}^n \sum_{(n_i=n+j_s+1)}^{(n-j_s+1)}$$

$$\sum_{\mathbb{k}_1=j_s+l_{ik}-l_s}^{n_{is}+j_s-\mathbb{k}_1} \sum_{\mathbb{k}_2=j_{ik}-j_{ik}+1}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}$$

$$\frac{(n_i - \dots)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - \dots - \mathbb{k}_2 - 1)!}{(j_{ik} - \dots)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}$$

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$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{( )} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{( )} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot
 \end{aligned}$$

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$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$f_z \mathcal{S}_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)} \sum_{j_{ik} = l_{ik} + n - D}^{l_{ik} - l + 1} \sum_{(j_i = l_i + n - D)}^{(l_i - l + 1)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{j_i = l_i + n - D}^{(l_{ik} + s - l - j_{sa}^{ik} + 1)} \sum_{j_{ik} = l_{ik} + n - D}^{(n_i - j_s + 1)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(n_i - j_s + 1)} \frac{(n_i + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{ik}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{l_s+l} \sum_{j_i=l_i+l-1}^{l_i+l} \sum_{j_{ik}=l_s+l_{ik}-D-1}^{l_{ik}} \sum_{j_i=l_i+n-D}^{l_i+n-D-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \sum_{n_s=n-j_i+1}^{(n_i-n_{is}-1)!} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s- )} \sum_{(=l_i+n-D)}^{( )}$$

$$\sum_{=n+k}^n \sum_{(n_{is}=n_{ik}+1)}^{(n_{is}+1)}$$

$$\sum^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik}^{k_1} - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \geq D - n - 1 \wedge$$

$$D + j_i + s - n - l_i - 1 \leq l \leq D - n + 1 \wedge$$

$$j_s \leq j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j_i$$

$$l_{ik} - j_{sa}^{ik} = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$



$$\begin{aligned}
 fZ_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-l-j_{sa}^{ik}+2)} \\
 &\quad \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=l_i+n)}^{(l_i-l+1)} \\
 &\quad \sum_{n_i=n+k}^n \sum_{(n_{is}=n-k-j_s+1)}^{(n_i-j_s+1)} \\
 &\quad \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_i+j_s-j_{ik}-1} \sum_{(n_s=n-j_i+1)}^{(n_i-j_{ik}+1)} \\
 &\quad \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_i - n_{ik} - j_s + 1)!} \\
 &\quad \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 &\quad \frac{(n_{ik} - n_{ik} - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_i + j_{ik} - n_s - j_i - k_2)!} \\
 &\quad \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &\quad \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 &\quad \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \\
 &\quad \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 &\quad \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-l-j_{sa}^{ik}+2)} \\
 &\quad \sum_{j_{ik}=j_s+l_{ik}-l_s}^{( )} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - n)!}$$

$$\frac{(D - n)!}{(D - j_i - n)!(n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: (j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i)$$

$$s > 1 \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
& \sum_{n_{ik}=n+l_k-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - l_{k_2})!} \cdot \\
& \frac{(n_s - j_i - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l_i - 1)!}{(j_s - l_i + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \\
& \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_i-l+1)} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_s=0}^{(n_s - 1)} \sum_{j_{sa}^{ik}=0}^{(j_{sa}^{ik} + 1)} \\
& \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{j_i=l_i+n-D}^{(n_i-j_s+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(n_s - 1)} \\
& \frac{(n_s + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_s + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_i, j_i} = \sum_{k=l}^{(j_i - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s - D)}^{(j_i - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = l_{ik} + j_{sa}^{ik} - D - s}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i - l_{ik})}^{(j_i - l_{ik})}$$

$$\sum_{n_i = n + \mathbb{k}}^{(n_i - j_s + 1)} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\begin{aligned}
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-l-s+1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j_i=j_{ik}+l_i-l)}^{( )} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-1}^{n_{is}+j_s-j_{ik}} \sum_{(n_{is}+j_{ik}-j_i-k_2)}^{(n_{is}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{ik}-k_2-1)!}{(j_i-j_s-1)! \cdot (n_{is}+j_{ik}-n_s-j_i-k_2)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \\
 & \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-k_2)}^{( )} \frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - 1)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$

$s > 2 \wedge s = s + k$

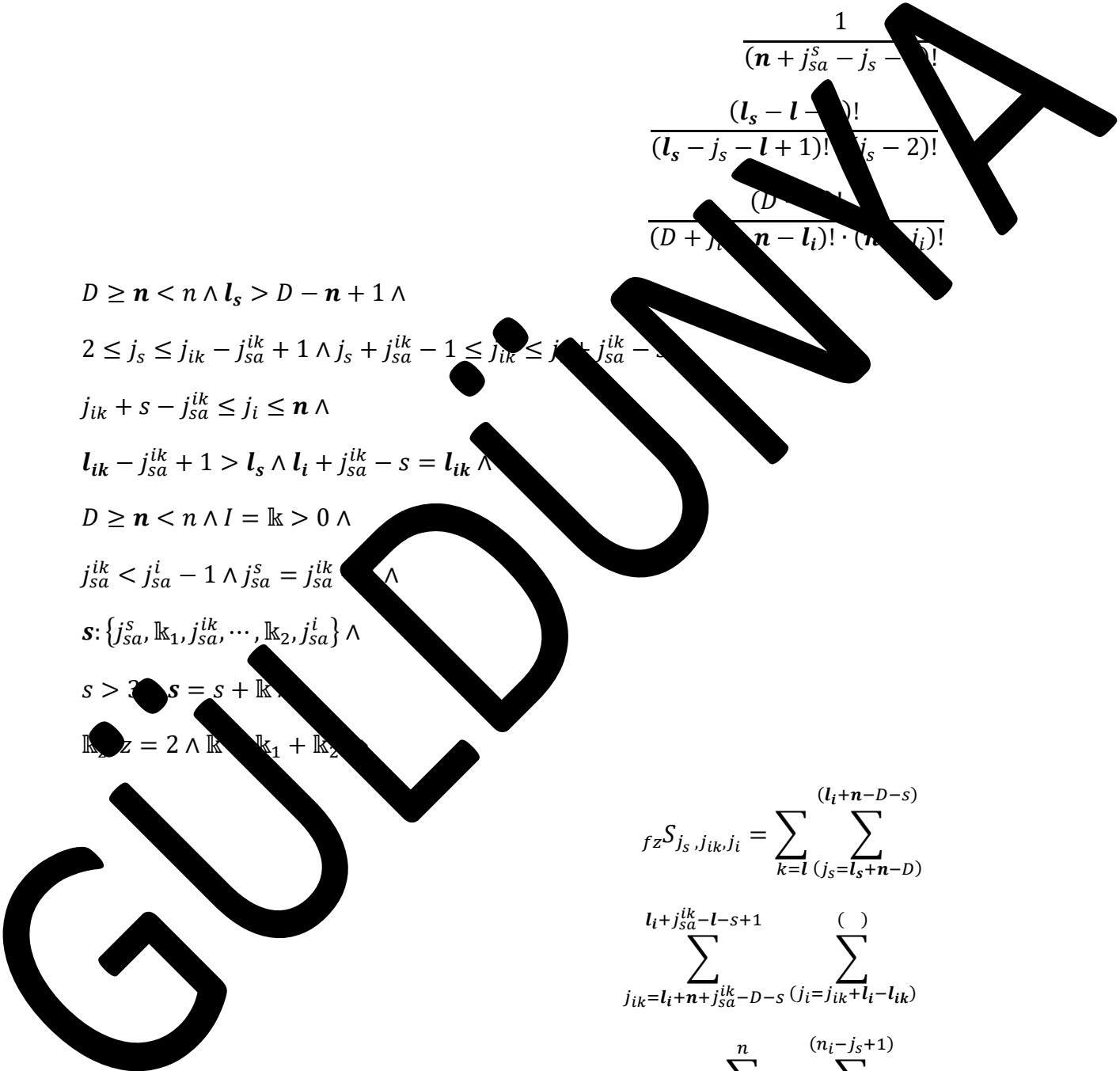
$k_2 = 2 \wedge k = k_1 + k_2$

$$fz_{j_s, j_{ik}, j_i}^S = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_s - 1)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)}^{(l_s - l + 1)} \\
& \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{l_i + j_{sa}^{ik} - l - s + 1} \sum_{(j_i = j_{ik} + l_i - l_{ik})}^{( )} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
\end{aligned}$$



$$\begin{aligned}
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=1}^{(l_s - l + 1)} \sum_{j_s = l_i + n - l_s - s + 1}^{(j_s - l + 1)} \sum_{j_{ik} = j_s + j_{sa}^{ik}}^{(j_i = j_{ik} + l_i - l_{ik})} \sum_{j_s = 1}^{(j_s + 1)} \sum_{n_{is} = n + k - j_s + 1}^{(n_{is} = n + k - j_s + 1)} \sum_{n_{is} = n_{is} + j_s - k - k_1}^{(n_s = n_{ik} + j_{ik} - j_i - k_2)} \sum_{(n_s = n_{ik} + j_{ik} - j_i - k_2)}^{(n_s = n_{ik} + j_{ik} - j_i - k_2)} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + k + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_i + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - 1)}^{(j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = j_i + l_{ik} - l}^{(l_s - l)} \sum_{(j_s = n + s - j_{sa}^{ik})}^{(l_s - l)}$$

$$\sum_{(n_i = n + k_1 - j_{ik} - l)}^{(n_i - j_s)} \sum_{(n = n + k_2 - j_i - 1)}^{(n + k_2 - j_i - 1)}$$

$$\sum_{(n_{is} = n - j_{ik} - k_1)}^{(n_i - j_s)} \sum_{(n_s = n - j_i + 1)}^{(n_s - j_i + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=l_s+s-l+1)}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2}+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_1})} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}+1)!}{(j_{ik}-j_s+1)!(n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-l_{k_2}-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_s-j_i-l_{k_2})!} \cdot \frac{(n_i-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_i+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}^{(l_s+s-l)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}
 \end{aligned}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - D)} \sum_{j_{ik} = l_{ik} + n - D}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + l_i - l_{ik})}^{()} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - l_s + 1)!} \cdot \\
 & \frac{(n - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{l+1} \sum_{(j_s = l_s + n - D)}^{l+1} \\
 & \sum_{l_s + j_{sa}^{ik} - l + 1}^{-l+1} \sum_{(j_i = j_{ik} + l_i - l_{ik})}^{(\cdot)} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{(n_i-j_s+1)} \sum_{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}-j_{ik}-k_1} \sum_{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_{is} + n_{ik} - j_{ik} + k_1 - n - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} - j_{is} + j_{ik} + k_1 - n - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n \wedge l_s > D - 1 + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_s^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{(j_s=l_s+n-D)}^{( )}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n}^n \sum_{(j_s=j_s+1)}^{(j_s+1)}$$

$$\sum_{n_{is}+j_s}^{\mathbb{k}_1} \sum_{(n_{ik}+j_{ik})}^{\mathbb{k}_2}$$

$$\sum_{(j_{ik}+1)}^{(j_{ik}+1)} \sum_{(n-j_i+1)}^{(n-j_i+1)}$$

$$\frac{(n_i - n_{is})}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

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$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(n_{ik} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(n_i-j_s+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\cdot)} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\cdot)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{(\cdot)} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{(\cdot)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot
 \end{aligned}$$

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$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)} \sum_{j_{ik} = j_i + l_{ik} - l_i}^{(l_i - l + 1)} \sum_{(j_i = l_i + n - D)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_{sa}^{ik} = j_{sa}^{ik} + 1}^{(j_{ik} - j_s - j_{sa}^{ik} + 1)} \sum_{j_s = j_s}^{(l_s + s - l)} \\
& \sum_{i_{ik} = j_i + l_{ik} - l_i}^{(n)} \sum_{(j_i = l_i + n - D)}^{(n_i - j_s + 1)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(j_s - l_i + 1)} \\
& \frac{(n_s + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_s + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}} = \sum_{l=1}^n \sum_{(j_s=l_s+n-D)}^{(n)} \sum_{(j_i=l_i+n+j_s-D-s)}^{(n)} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(n)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\cdot)} \sum_{(n+l_{ik}(n_{is}=n+l_{ik}+1))}^{(n_i+l_{ik}+1)} \sum_{(j_{ik}=n_{is}+j_{ik}-l_{k_1})}^{(\cdot)} \sum_{(j_i=l_{k_2})}^{(\cdot)} \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - s - 2 \cdot l_{k_2})!}{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_{k_2} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = D - n - 1 \wedge$$

$$D + j_i + s - n - l_i - 1 \leq l \leq n - n + 1 \wedge$$

$$l \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j_i \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$j_{sa}^{ik} \geq n - l_i \wedge I = l_{k_2} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + l_{k_2} \wedge$$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz^{\mathcal{S}_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}^{(l_{ik}+s-l-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+l_i}^n \sum_{(n+l_i-j_s+1)}^{(n+l_i-j_s+1)}$$

$$\sum_{n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{(n_{ik}+j_{ik}-n_{is})} \sum_{(n_{is}+j_s-j_{ik}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-n_{is})}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{is} - \mathbb{k}_2 - 1)!}{(n_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}^{(l_s+s-l)}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\}$$

$$s > 1 \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\quad)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_{ik} - l_{k_2})!} \cdot \\
 & \frac{(n_s - j_{ik} - 1)!}{(n_s + j_{ik} - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - j_s - 1)!}{(j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot
 \end{aligned}$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{j_i + j_{sa}^{ik} - s} (l_{ik} + s - l - j_{sa}^{ik} + 1)$$

$$\sum_{(j_i = s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$



$$\begin{aligned}
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (j_i)!} + \\
 & \sum_{j_{sa}^{ik} = l_{ik} - s + 1}^{l_i - l + 1} \sum_{j_{ik} = l_{ik} + s - l - j_{sa}^{ik} + 2}^{l_i - l + 1} \sum_{n_i = n + \mathbb{k}_1}^n \sum_{n_{is} = n + \mathbb{k}_2 - j_s + 1}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{n_s = n - j_i + 1}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \sum_{j_{ik}=j_i+j_{sa}^{lk}-s}^{(l_{ik}+s-l-j_{sa}^{lk})} \sum_{(s+1)}^{(n_i+1)} \sum_{(n+l)}^{(n_{is}+n_{ik}+1)} \sum_{(n_{ik}=n_{is}+j_{ik}-k_1)}^{(j_i-k_2)} \frac{(n_{is} + n_{ik} + j_{ik} - k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_{is} + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \leq l \wedge l_s \leq D - n - 2 \wedge$$

$$1 \leq j_{ik} - j_{sa}^{lk} + j_s + j_{sa} - 1 \leq j_{ik} \leq j_i + j_{sa}^{lk} - s \wedge$$

$$j_{ik} + s - j_{sa}^{lk} \leq j_i \leq n$$

$$l_{ik} - k + 1 = l_s - l + j_{sa}^{lk} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$n \geq n - l \wedge I = k > 0 \wedge$$

$$j_{sa}^{lk} < j_{sa}^l - 1 \wedge j_{sa}^s = j_{sa}^{lk} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{lk}, \dots, k_2, j_{sa}^l\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$\mathbb{k}_2: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j_{s_a}^{ik}+1}^{j_i+j_{s_a}^{ik}-s} \sum_{(j_i=s+l)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+l}^n \sum_{(j_s+1)}^{(j_s+1)}$$

$$\sum_{i_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{ik}+j_{ik}-j_{ik_2})}^{(n_{ik}+j_{ik}-j_{ik_2})}$$

$$\frac{(n_i - n_{is})}{(j_s - 2) \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1) \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{is} - \mathbb{k}_2 - 1)!}{(j_{ik} - 1) \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{s_a}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{s_a}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j_{s_a}^{ik}+1}^{l_s+j_{s_a}^{ik}-l} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!}$$

$$\frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=s+1)}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

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$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i - l_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$l_i \leq D + s - n \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

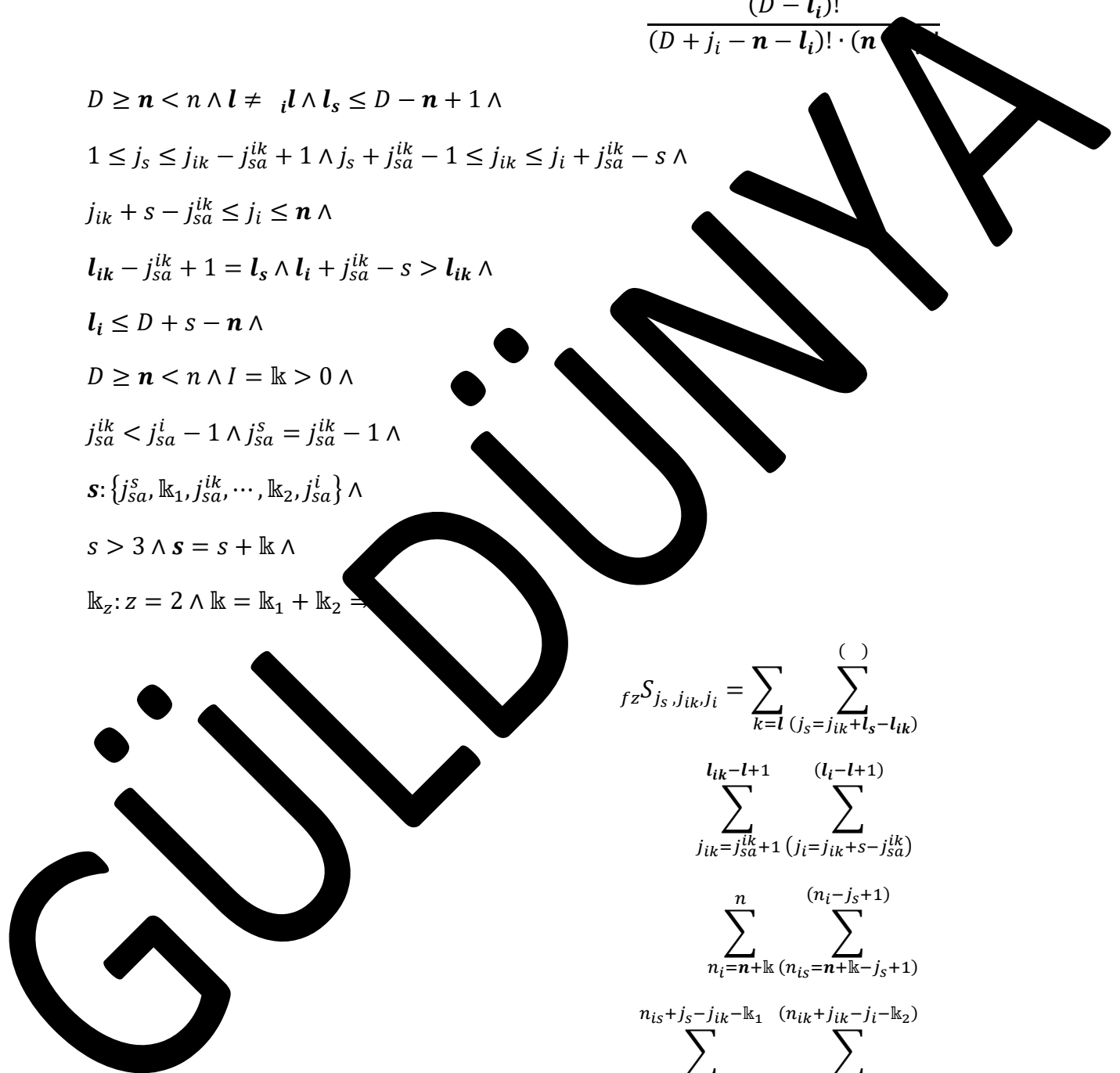
$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$

$s > 3 \wedge s = s + k \wedge$

$k_z: z = 2 \wedge k = k_1 + k_2 =$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$



$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{n_{is} = n + \mathbb{k} - j_s + 1}^{(n_i - j_s + 1)} \sum_{j_{ik} = j_{sa}^{ik} + 1}^{(j_i - j_{ik} - 1)} \sum_{j_i = j_{ik} + s - j_{sa}^{ik}}^{(j_i + j_{sa}^{ik} - j_{ik} - s)}$$

$$\frac{(n_i + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{j_s=j_{ik}+l_s-l_{ik}} \sum_{j_i=j_{ik}+l_i-l_{ik}}^{j_i=j_{ik}+l_i-l_{ik}} \sum_{j_{ik}=j_{ik}+1}^{j_{ik}=j_{ik}+1} \sum_{j_{sa}^i=j_{sa}^i}^{j_{sa}^i=j_{sa}^i} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{n_i-j_s+1} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{ik}+j_{ik}-j_i-\mathbb{k}_2} \sum_{n_s=n-j_i+1}^{n_s=n-j_i+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \sum_{(n+l_k)}^{(n_i+l_k+1)} \sum_{(n_{is}=n_{ik}+l_{ik}+1)}^{( )} \frac{(n_{is} + n_{ik} + j_{ik} - l_{ik_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_{ik} + l_{ik_1} - n_s - j_i - s - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq l \wedge l_s \leq D - n - 2 \wedge$$

$$1 \leq j_{ik} \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^s - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n$$

$$l_{ik} - l_{ik} + 1 = l_s - l + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$n \geq n - l \wedge I = l_k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + l_k \wedge$$



$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=2)}^{(l_i-l+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(n-j_s+1)}$$

$$\sum_{n_i=n+1}^{n} \sum_{(n_i+j_s+1)}^{(n+j_s+1)}$$

$$\sum_{n_{is}+j_s-j_{sa}^{ik}}^{(n_{ik}+j_{ik}-j_{sa}^{ik})} \sum_{(i_{ik}+1)}^{(n-j_i+1)}$$

$$\frac{(n_i - n_{is})}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{is} - \mathbb{k}_2 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=2)}^{(l_i-l+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{( )} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_1})}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!} \cdot$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = l_k = 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_i\} \wedge$$

$$s > 3 \wedge s \leq s + l_k \wedge$$

$$l_{k_2}: z \geq 2 \wedge l_k = l_{k_2} \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!}$$

$$\frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

GÜLDÜSÜZ

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$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 =$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \sum_{j_{ik} = j_{sa}^{ik} + 1}^{j_i + j_{sa}^{ik} - s} \sum_{(j_i = l_i + n - D)}^{(l_{ik} + s - l - j_{sa}^{ik} + 1)} \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - n_s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - n_s)!} \cdot \\
& \frac{(l_i - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_s=j_{ik}+l_s-l_{ik}}^{l_s+l+1} \sum_{j_{sa}^{ik}=j_s+1}^{(l_i-l+1)} (j_i=l_{ik}+s-l-j_{sa}^{ik}+2) \\
& \sum_{n_i=n+\mathbb{k}_1}^n \sum_{(n_{is}=n+\mathbb{k}_1-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \frac{(l_{ik}+s-j_{sa}^{ik}+1)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(n_i-j_s+1)!}{(n_i+l_{ik}-j_{ik}-l_{k_1}-j_i-l_{k_2})!} \cdot \frac{(n_{is}+n_{ik}-j_{ik}+l_{k_1}-n_i-j_i-s-2 \cdot l_{k_2})!}{(n_{is}+n_{ik}-j_{ik}+l_{k_1}-n_i-j_i-n-2 \cdot l_{k_2}-j_{sa}^s)!} \cdot \frac{1}{(n+j_{sa}^s-j_s-s)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l \leq D - n + 1 \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_s - j_{sa}^{ik} = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{ik} + s - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = l_{k_1} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$



GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - k)! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{\binom{D}{j_s}} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{\binom{D}{j_s}} \\
 & \sum_{j_{ik} = j_i + j_{sa}^{ik} - s}^{(l_s + s - l)} \sum_{(j_i = l_i + n - D)}^{\binom{D}{j_s}} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}^{\binom{D}{j_s}} \sum_{(n_s = n_{ik} + j_{ik} - j_i - k_2)}^{\binom{D}{j_s}} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot
 \end{aligned}$$



$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

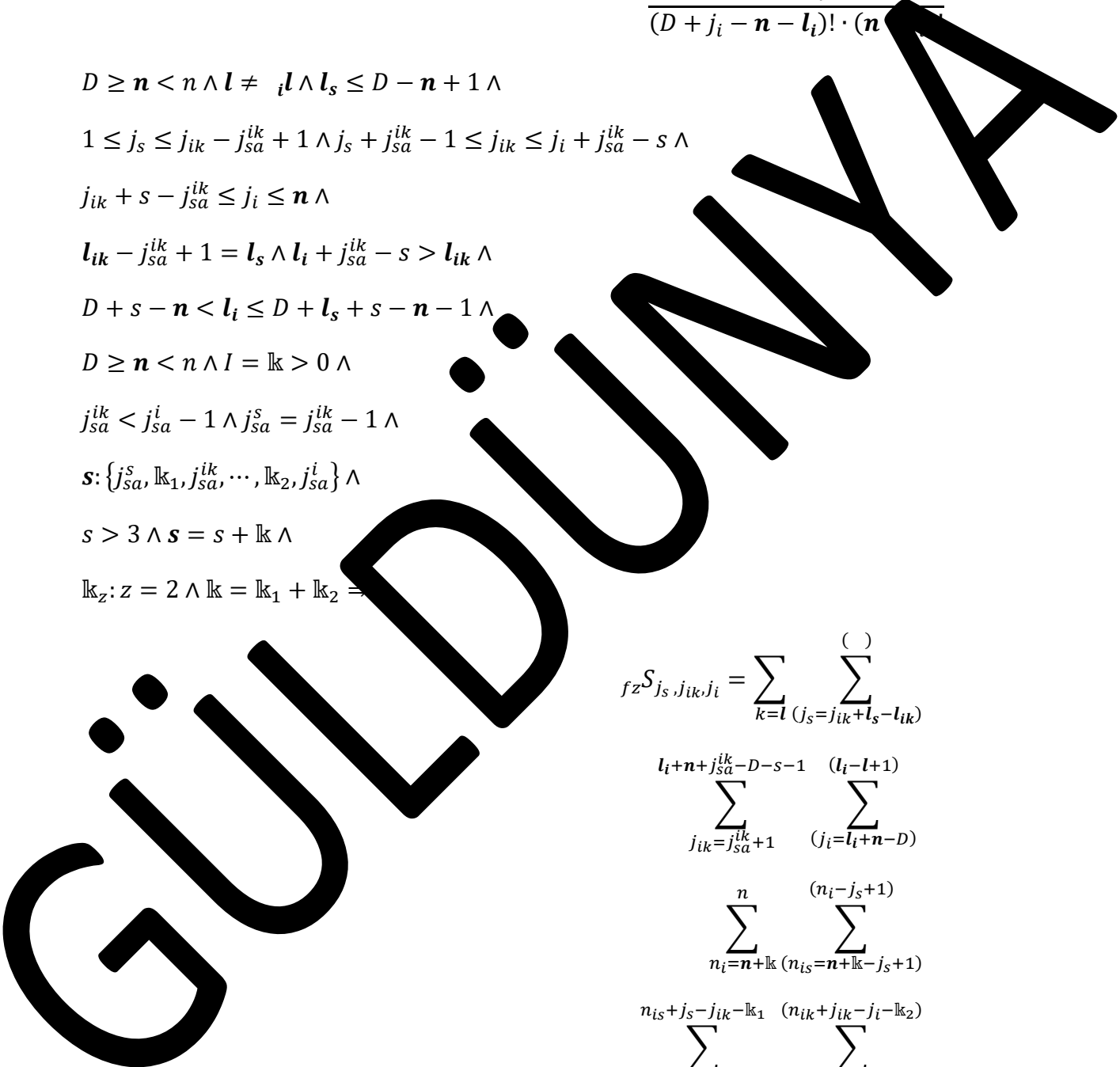
$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$

$s > 3 \wedge s = s + k \wedge$

$k_z: z = 2 \wedge k = k_1 + k_2 =$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\ )} \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$



$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - n - s)!}{(j_{ik} + l_i - j_i - l_{ik} - s)! \cdot (j_i + j_{sa}^{ik} - n - s)!} \cdot \\
 & \frac{(l_i - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{l=1}^{n-l+1} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{n-l+1} \sum_{j_i=n+j_{sa}^{ik}-D-s}^{l_i-l+1} \sum_{j_i=j_{ik}+s-j_{sa}^{ik}}^{(l_i-l+1)} \\
 & \sum_{n_i=n+\mathbb{k}_1}^n \sum_{(n_{is}=n+\mathbb{k}_1-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

GÜLDÜMÜŞA

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{n+l}^{(n-j_s+1)} \sum_{(n+l-k-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}-j_{ik}-k_1} \sum_{n_{ik}=n_{ik}+j_{ik}-j_i-k_2}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_{ik} - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_{ik} + k_1 - n_{ik} - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n \wedge l \neq i \wedge l \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - l_{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + l_s = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{ik} + s - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

$$\sum_{(n_i=n+l_s-j_{ik})}^{(n_i-l+1)}$$

$$\sum_{(n_{ik}=n_s-j_{ik}+1)}^{(n_i+l_s-j_{ik}-\mathbb{k}_1+n+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!}$$

$$\frac{(n_i-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_s-\mathbb{k}_2-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i-\mathbb{k}_2)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

GÜLDÜZYA

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

GÜLDÜSÜZ

$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 =$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{(l_i-l+1)} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}^{(n)} \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+k_2-j_{ik}+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \sum_{(n_s=n-j_i+1)}^{(n_i-n_{is}-1)!} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 1)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(l_i - 1)!}{(D + j_i - n - l_i)! \cdot (j_i)!} + \\
 & \sum_{k=1}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{j=0}^{D-s+1} \frac{(l_i - l + 1)!}{\sum_{j_i = j_s + l_{ik} - l_s} \sum_{j_i = j_{ik} + s - j_{sa}^{ik}} (j_i - l + 1)!} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot
 \end{aligned}$$

GÜLDÜMBA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=l}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{(j_s = l_i + n - D - s + 1)}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{j_{ik} = j_s + l_{ik} - l_s}^{(j_s + l_{ik} - l_s - j_{sa}^{ik})} \sum_{(n_i = n - l_i - l_s + 1)}^{(n_i - l_i + 1)} \sum_{(n + l_k)}^{(n_i - l_i + 1)} \sum_{(n_{ik} = n_{is} + l_{ik} - l_{k_1})}^{(n_i - l_i + 1)} \sum_{(j_i = l_{k_2})}^{(j_i - l_{k_2})} \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq l \wedge l_s \leq D - n - 2 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^s - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n$$

$$l_{ik} - l_{k_1} + 1 = l_s - l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n - l_i \leq D + l_{ik} + s - n - j_{sa}^{ik} \wedge$$

$$n - l_i \wedge l = l_k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + l_k \wedge$$



$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}$$

$$\sum_{n_i=1}^n \sum_{(n_i=n+1-j_s+1)}^{(n-j_s+1)}$$

$$\sum_{\mathbb{k}_1}^{n_{is}+j_s-\mathbb{k}_1} \sum_{\mathbb{k}_2}^{(n_{ik}+j_{ik}-\mathbb{k}_2)}$$

$$\sum_{\mathbb{k}_1-j_{ik}+1}^{(n_{is}-j_{ik}+1)} \sum_{\mathbb{k}_2}^{(n_{is}-j_{ik}+1)}$$

$$\frac{(n_i - j_{ik} + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} + 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - j_s - \mathbb{k}_2 - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

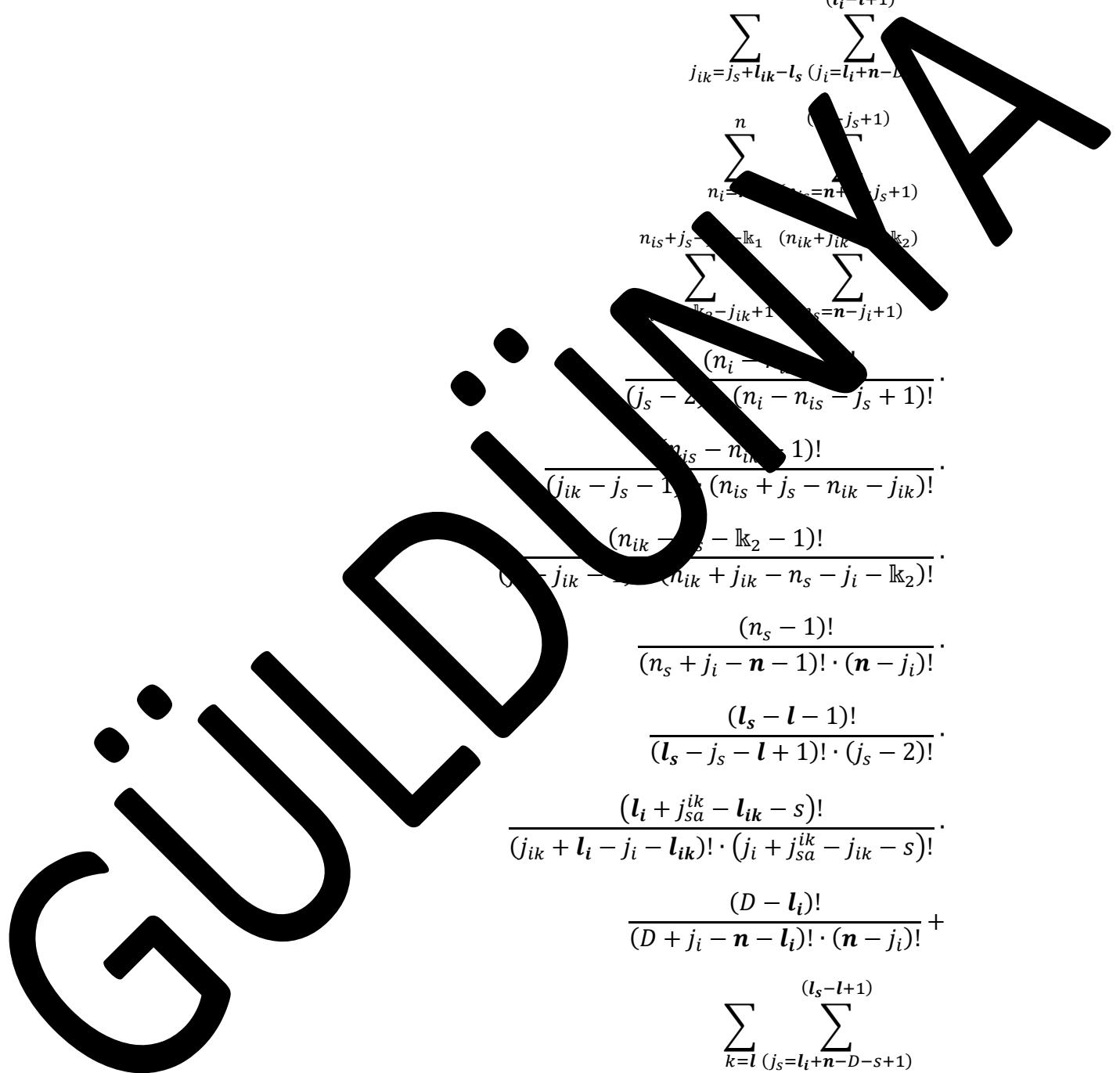
$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}$$



$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{( )} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{( )} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}
 \end{aligned}$$

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$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - l_i \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

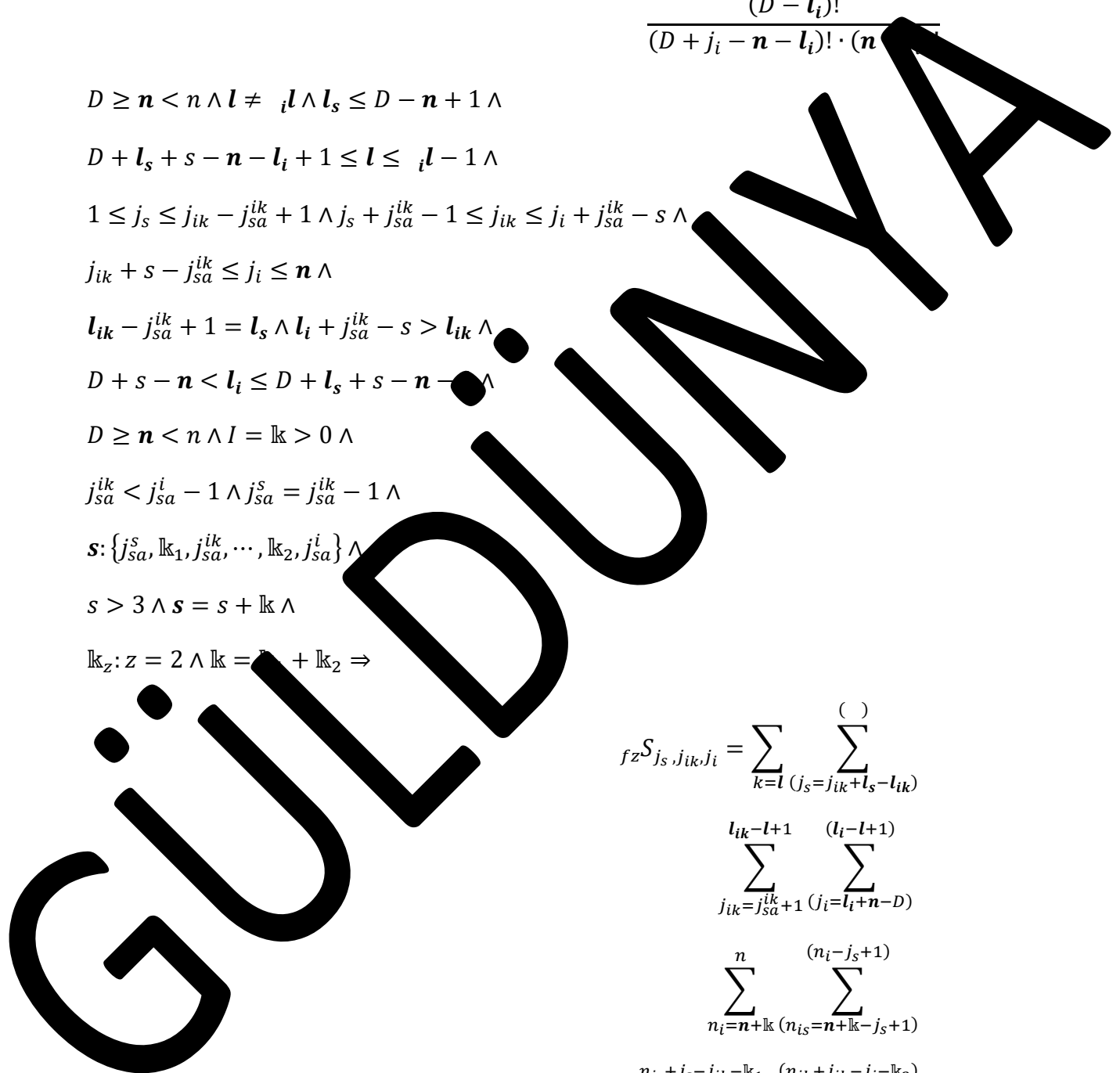
$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)} \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik} - l + 1} \sum_{(j_i = l_i + n - D)}^{(l_i - l + 1)} \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$



$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - n_s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - n_s)!} \cdot \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=1}^n \sum_{j_s=j_{ik}+l_s-l_{ik}}^{n-k} \frac{(l_{ik}+s-l-j_{sa}^{ik}+1)!}{\sum_{k=j_i+j_{sa}^{ik}-s}^n \sum_{j_i=l_i+n-D}^{(n_i-j_s+1)} (n_{is}=n+k-j_s+1)} \cdot \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^n \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(\cdot)} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq l_i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{ik} + s - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\sum_{j_{sa}^{ik}, j_{ik}, j_i} \sum_{n_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \sum_{l_s+j_{sa}^{ik}-l}^{(l_i-l+1)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{k=l}^{( )} \sum_{j_s=j_i+l_s-l_{ik}}^{( )} \sum_{j_{ik}=j_i+l_s-j_s}^{( )} \sum_{j_i=l_i+n-D}^{( )} \sum_{j_s=j_s+1}^{( )} \sum_{n_{is}=n+l_k-j_s+1}^{( )} \sum_{n_{is}=n_{is}+j_s+l_k-l_{k_1}}^{( )} \sum_{n_s=n_{ik}+j_{ik}-j_i-l_{k_2}}^{( )} \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_{k_2})!}{(n_{is} + n_{ik} + j_s + l_k + l_{k_1} - n_s - j_i - n - 2 \cdot l_{k_2} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s > n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{j_s=1}^{(l-j_{sa}^{ik}+2)} \sum_{j_{ik}=j_s+l}^{(j_i-l-j_{sa}^{ik}+2)} \sum_{j_i=j_{ik}+l}^{(j_i+l+n-D)} \sum_{n_{is}=j_{ik}-\mathbb{k}_1}^{(n_{is}+1)} \sum_{n_{ik}=j_{ik}-\mathbb{k}_2-j_{ik}+1}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}^{(n_i-j_s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n_i-j_s+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_k}^{(n_i-j_s+1)} \sum_{(n_{ik}=n_{is}+j_{ik}-j_i)}^{(n_i-j_s+1)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots + j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} + l_{ik} - j_i - l_s - l_k - j_{sa}^s)!} \cdot \frac{1}{(j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq 1 \wedge l_s \leq D - n - 1 \wedge$$

$$1 < j_s \leq j_{ik} + j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i - n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D > n - n \wedge I = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{ik_1}, j_{sa}^{ik_2}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$



$$\begin{aligned}
 f_z S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)} \\
 &\quad \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=s+1)}^{(l_s+s-l)} \\
 &\quad \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 &\quad \sum_{n_{is}+j_s-j_{ik}}^{(n_i+j_{ik}-l_i-l_{k_2})} \sum_{n_{ik}=n+l_{k_2}-1}^{(n_i+j_{ik}-l_i-l_{k_2})} \sum_{(n_s=n-j_i+1)}^{(n_i+j_{ik}-l_i-l_{k_2})} \\
 &\quad \frac{(n_i - n_{k_2} - 1)!}{(j_s - 2)! \cdot (n_i - j_s + 1)!} \cdot \\
 &\quad \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik})!} \cdot \\
 &\quad \frac{(n_{ik} - l_{k_2} - 1)!}{(j_i - j_s - 1)! \cdot (n_i + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \\
 &\quad \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 &\quad \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 &\quad \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 &\quad \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\quad \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)} \\
 &\quad \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_i-l+1)} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
 &\quad \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_s - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - j_s - 1)!}{(n_s + j_s - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - j_s - 1)!}{(j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_s - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + \mathbf{n} - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )} \\
 & \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=s+1)}^{(\ )} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(\ )} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot
 \end{aligned}$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i - l)!}{(D + j_i - n - l_i)! \cdot (j_i - l)!} + \\
 & \sum_{j_i=l_i}^{l_i+l_s+1} \sum_{j_s=2}^{(l_s-l+1)} \sum_{j_{ik}=j_{ik}+j_{sa}^{ik}-l+1}^{(l_i+l_s+1)} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(j_s)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \cdot \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\ )}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_{ik}+1)}^{(n_{is}+1)}$$

$$\sum_{(j_i=j_{ik}-l_{k_1})}^{(\ )} \sum_{(j_i=l_{k_2})}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = l \wedge l_s = D - n - l \wedge$$

$$1 \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^s - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s - l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_i - n \wedge$$

$$n - l_i \wedge l = l_k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + l_k \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n_{is}+j_s}^n \sum_{(n_i=n_{is}+j_s+1)}^{(n_i=j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-\mathbb{k}_1}^{n_{ik}+j_{ik}} \sum_{(n_{ik}=n_{is}+j_s-\mathbb{k}_2)}^{(n_{ik}+j_{ik})}$$

$$\sum_{n_{ik}=n_{is}+j_s-\mathbb{k}_1}^{n_{ik}+j_{ik}} \sum_{(n_{ik}=n_{is}+j_s-\mathbb{k}_2)}^{(n_{ik}+j_{ik})}$$

$$\frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik})!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{is} - \mathbb{k}_2 - 1)!}{(n_{ik} + j_{ik} - n_{is} - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_k)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$D + j_{sa}^{ik} - n < l_i \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$

$D \geq n < n \wedge I = l_k = 0 \wedge$

$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge$

$s: \{j_s, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_i\} \wedge$

$s > 3 \wedge s = s + l_k \wedge$

$l_{k_2}: z = 2 \wedge l_k = l_{k_2} \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{i_k}=n+l_{k_2}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{i_k}+j_{i_k}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_i - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_s - l_{k_2} - 1)!}{(j_i - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_s - j_i - l_{k_2})!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{i_k} - j_{i_k} - j_{s_a} + 1)!}{(n_{i_k} + l_{i_k} - j_{i_k} - j_{s_a})! \cdot (j_{i_k} - j_s - j_{s_a} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)} \\
 & \sum_{j_{i_k}=j_i+l_{i_k}-l_i}^{(l_i-l+1)} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{i_k}=n+l_{k_2}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{i_k}+j_{i_k}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - l_s + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{s=1}^l \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_s=j_{ik}-j_{sa}^{ik}+1} \\
 & \sum_{j_{ik}=j_i+l_{ik}-l_i}^{j_{ik}=j_i+l_{ik}-l_i} \sum_{j_i=l_i+n-D}^{(l_s+s-l)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}^{(\cdot)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz = \sum_{k=l}^{j_{ik} - j_{sa}^{ik} + 1} \sum_{(j_s=2)}^{(j_{ik} - j_{sa}^{ik} + 1)}$$

$$+ j_{sa}^{ik} - l \quad \sum_{(j_s=2)}^{(j_{ik} - j_{sa}^{ik} + 1)}$$

$$j_{ik} = l_i + j_{sa}^{ik} - D - s \quad (j_i = j_{ik} + l_i - l_{ik})$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}-l+1}^{l_i+j_{sa}^{ik}-l-s+1} \dots$$

$$\sum_{(n_i-j_s+1)}$$

$$\sum_{(n_i+l_k)} \sum_{(n_i+l_k-j_s+1)}$$

$$\sum_{(n_{is}+j_{ik}-l_k-1)} \sum_{(n_{ik}-j_i-l_k)}$$

$$\sum_{(n_i+l_k-2-j_{ik})} \sum_{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - l_{k2} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k2})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

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$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{( )} \sum_{(n_s=n_{ik}+l_{k_2}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2})! \cdot 2 \cdot (j_s - 1)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2})! \cdot (n - l - j_s - 1)! \cdot (j_{sa}^s)!}$$

$$\frac{1}{(n - l - j_s - j_s - s)!}$$

$$\frac{(l_s - l_{k_1} - l_{k_2})!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i - l_{ik})!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq l \wedge l_s \leq l - n + 1$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_{sa}^{ik} < n \wedge$$

$$l_i - j_{sa}^{ik} + l_{k_1} + l_{k_2} \geq l_s \wedge l_i - j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{k_1} < D + l_{k_2} - j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq l_i < n \wedge l = l_k > l_s \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^i, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = l_{k_1} + l_{k_2} \wedge$$

$$l_{k_2} \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{( )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_i+j_{sa}^{lk}-l-s+1} \binom{(\quad)}{\quad} \\
 & \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-k_2-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_s-j_i-k_2)!} \cdot \frac{(n_s-j_i-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{lk}+1)!}{(j_{ik}-l_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{lk}+1)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1}^{l_i+j_{sa}^{lk}-l-s+1} \binom{(\quad)}{\quad} \\
 & \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)} \\
& \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1} \sum_{(j_i = j_{ik} + l_i - l_{ik})} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned} & \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)} \\ & \sum_{(l_s+s-l)} \\ & \sum_{j_{ik}-j_i+l_{ik}-l_i} (j_i=l_{ik}+n+s-D-j_{sa}^{ik}) \\ & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\ & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\begin{aligned}
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l_s}^{(l_s-l+1)} \sum_{s=2}^{(l_s-l+1)} \\
& \sum_{j_i=j_i+l_{ik}-l_s}^{(l_{ik}+j_i-l_s+1)} \sum_{j_s=l_s+s-l+1}^{(j_s+1)} \\
& \sum_{n_{ik}=n_{ik}+k}^{(n_{is}=n+k-j_s+1)} \\
& \sum_{n_{ik}=n_{ik}-j_{ik}-k_1}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
& \sum_{n_{ik}=n_{ik}-j_{ik}+1}^{(n_s=n-j_i+1)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
\end{aligned}$$



$$\begin{aligned}
 & \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \\
 & \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_{ik}+n+s-D-j_{ik}^{ik})}^{(\cdot)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{ik}}^{(\cdot)} \sum_{(n_{ik}=n_{is}+j_{ik}-j_i)}^{(\cdot)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_{ik} + \dots + l_{k1} - j_i - s - l_k - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n_{is} + n_{ik} + j_{ik} + \dots + j_{sa}^s - j_s - s)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l \neq 1 \wedge l_s \leq D - n - 1 \wedge$

$1 < j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{ik} + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i - n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$D + s - n < l_s \leq D + l_i + s - n - 1 \wedge$

$D > n < n \wedge I = l_k > 0 \wedge$

$j_{sa}^{ik} < j_{sa}^i \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s \in \{j_{sa}^{ik-1}, j_{sa}^{ik}, \dots, l_{k2}, j_{sa}^i\} \wedge$

$s > 3 \wedge s = s + l_k \wedge$

$l_{kz}: z = 2 \wedge l_k = l_{k1} + l_{k2} \Rightarrow$

$$\begin{aligned}
 f_{z^S} S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(j_{ik}-j_{s_a}^{ik}+1)} \sum_{(j_s=2)}^{(j_{ik}-j_{s_a}^{ik}+1)} \\
 &\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{s_a}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l)}^{( )} \\
 &\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n+l_{k_2}-j_i+1}^{n_{is}+j_s-j_{ik}} \sum_{(n_s=n-j_i+l_i-l_{k_2})}^{(n_{is}+j_s-j_{ik}+j_{ik}-l_{k_2})} \\
 &\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 &\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 &\frac{(n_{ik} - n_{k_2} - 1)!}{(j_i - j_{k_2} - 1)! \cdot (n_{is} + j_{ik} - n_s - j_i - l_{k_2})!} \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 &\frac{(l_{ik} - l_s - j_{s_a}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{s_a}^{ik} + 1)!} \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)} \\
 &\sum_{j_{ik}=l_s+j_{s_a}^{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )} \\
 &\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_{ik} - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - n_{is} - 1)!}{(n_s + j_{ik} - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - j_s - 1)!}{(j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\quad)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(\quad)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot
 \end{aligned}$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_{ik} + n - D - j_{sa}^{ik})} \sum_{(j_s=2)} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\begin{aligned}
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=0}^{l_s - l + 1} \sum_{l_{ik} = l_{ik} + n - D - j_{sa}^{lk}} \binom{l_s - l + 1}{k} \binom{n - j_i}{l_i - l_{ik}} \\
& \sum_{n_i = n + k}^{n_i - j_s + 1} \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_s - j_{ik} - k_1} \sum_{(n_{ik} + j_{ik} - j_i - k_2)}^{(n_{ik} + j_{ik} - j_i - k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{lk}-1}^{( )} \sum_{(j_i=j_{ik}+l_i-l)}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_k}^{( )} \sum_{(n_{ik}+j_{ik}-j_i)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + \dots + j_{ik} + l_{k1} - \dots - j_i - \dots - l_k - j_{sa}^s)!}$$

$$\frac{1}{+ j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq 1 \wedge l_s \leq D - n - 1 \wedge$$

$$D + l_s + s - \dots - l_i + \dots \leq l \leq l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{lk} - 1 \wedge j_s + \dots \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - \dots \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{lk} + 1 \leq l_s \wedge l_{ik} - j_{sa}^{lk} - s = l_{ik} \wedge$$

$$D - \dots < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{lk} - j_{sa}^{lk} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}+1}^{n_{is}+j_s-j_{ik}} \sum_{(n_s=n-j_i)}^{(n_{ik}+j_{ik}-i-l_{k_2})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{ik} - l_{k_2} - 1)!}{(j_i - l_{k_2} - 1)! \cdot (n_{is} + j_{ik} - n_s - j_i - l_{k_2})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - 1 > l_s \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_i + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i\}$$

$$s > 1 \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l} \sum_{\binom{()}{j_s=2}}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{\binom{()}{j_i=j_{ik}+l_i-l_{ik}}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{is}=n+\mathbb{k}-j_s+1}}^{(n_i-j_s+1)}$$



$$\begin{aligned}
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_s)!} \cdot \\
 & \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_s - l_{k_2})!} \cdot \\
 & \frac{(n_s - j_s - 1)!}{(n_s + j_s - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - j_s - 1)!}{(j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_s - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_s+j_{sa}^{lk}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\quad)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{(\quad)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_{k_1})!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_{k_1} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot
 \end{aligned}$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i \wedge l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{j_{ik}=j_{ik}-l_i}^{(j_{ik}-j_{ik}+1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{(j_{sa}^{ik}-j_{sa}^{ik}+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_s=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(n_s-n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_s + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_s + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i \wedge l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned} & \sum_{(j_s=2)}^{(l_s-l)} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(l+1)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\ & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_{ik}+l_i-l_{ik})}^{(\ )}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n_{is}+1)}$$

$$\sum_{(j_i=l_{ik}+l_i-l_{ik})}^{(\ )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} - l_{ik} - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq l \wedge l_s \leq D - n - 2 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^s - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n$$

$$l_{ik} - l_{k_1} + 1 > l_s - l + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_i - n \wedge$$

$$j_s > n - 1 \wedge I = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$l_k: z = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{( )} \sum_{j_s=1}^{( )} \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_i-l_{i+1})} \sum_{j_i=s}^{( )} \sum_{n_i=n+l_k}^n \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_s=n_{ik}+j_{ik}-j_i-l_{k_2}}^{(n_{ik}-l_{k_1}-j_i-l_{k_2})} \frac{(n_i+n_{ik}-1)!}{(j_i-2)! \cdot (n_i+n_{ik}-j_{ik}+1)!} \cdot \frac{(n_{ik}+n_s-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i-l_{k_2})!} \cdot \frac{(n_s+j_i-n-1)! \cdot (n-j_i)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_i-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_s+1)! \cdot (j_{ik}-j_{sa}^{ik})!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \sum_{k=l}^{( )} \sum_{j_s=1}^{( )} \sum_{j_{ik}=j_{sa}^{ik}}^{( )} \sum_{j_i=s}^{( )} \sum_{n_i=n+l_k}^n \sum_{n_{ik}=n_i-j_{ik}-l_{k_1}+1}^{( )} \sum_{n_s=n_{ik}+j_{ik}-j_i-l_{k_2}}^{( )} \frac{(n_i+n_{ik}+j_{ik}+l_{k_1}-n_s-j_i-s-2 \cdot l_k)!}{(n_i+n_{ik}+j_s+j_{ik}+l_{k_1}-n_s-j_i-n-2 \cdot l_k-j_{sa}^s)! \cdot (n-s)!} \cdot \frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}$$

$$D \geq n < n \wedge l = {}_i l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, \dots, j_i} = \sum_{k=i}^{} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{i-k-i+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_s=n-j_i+1}^{n_{ik}+j_{ik}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{(j_i=1)}^{(\cdot)}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{(\cdot)} \sum_{(n_s=n_{ik}-j_i-l_{k_2})}^{(\cdot)}$$

$$\frac{(n_i + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - l_{k_2})!}{(n_i + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - l_{k_2} - j_{sa}^s)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik}$$

$$D \geq n < n \wedge l = l_{k_1} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1} - j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + 1 \wedge$$

$$l_{k_2}: 2 \leq l_{k_2} \wedge l_{k_2} = l_{k_1} + l_{k_2} \Rightarrow$$

$$f_Z^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_{ik}+s-l-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+l}^n \sum_{(n_{is}=n+l-j_s+1)}^{(n_i-j_s+1)}$$



$$\begin{aligned}
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
& \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - k_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - 1)!}{(j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)} \\
& \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=l_{ik}+s-l-j_{sa}^{ik}+2)}^{(l_i-l+1)} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_{ik} = l_i + j_{sa}^{ik} - s}^{(j_{ik} + l_i - j_i - l_{ik})} \sum_{j_{sa}^{ik} = j_{ik} + 1}^{(j_{ik} + l_i - j_i - l_{ik})} \\
& \sum_{n_i = n + \mathbb{k}_1}^n \sum_{(n_s = n + \mathbb{k}_1 - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(n_s - j_s + 1)} \\
& \frac{(n_{ik} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k}_1)!}{(n_{ik} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k}_1 - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{\mathbb{k}} \sum_{j_s=j_{ik}+1}^{(l_s+s-l)} \sum_{j_{ik}=n+j_{sa}^{ik}-D}^{j_i+j_{sa}^{ik}-1} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{j_{ik}-\mathbb{k}_1} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\begin{aligned}
 & \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_s+s-l)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n-k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}-1}^{\Delta} \sum_{(n_s=n-j_i+1)}^{\Delta} \\
 & \frac{(n_s - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_{ik} - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{is} + j_{ik} - n_s - j_i - k_2)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{i_s} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{i_s} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(D - s)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_s, \dots, \mathbb{k}_2, j_s\} \wedge$

$s > 1 \wedge s = s + \mathbb{k} \wedge$

$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - \mathbf{n} - 1)! \cdot (n - j_i)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - \mathbf{n} - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + \mathbf{n} - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )} \\
 & \sum_{j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}
 \end{aligned}$$

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$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_{ik}=l_{ik}}^{l_{ik}-1} \sum_{j_{sa}^{ik}=j_{ik}+1}^{(j_{ik}+j_{sa}^{ik}-j_{ik}-s)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{\dots} (j_s = j_{ik} + 1)$$

$$l_i + n + j_{sa}^{ik} - D - 1 \quad (l_i - l + 1)$$

$$j_{ik} + n + j_{sa}^{ik} - D \quad (n_i - j_s + 1)$$

$$n_i = n + k \quad (n_{is} = n + k - j_s + 1)$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$n_{is}+j_s-j_{ik}-l_{k_1}+j_{ik}-l_{k_2}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+l_{k_2})}$$

$$\frac{(n_s-n_{ik}-1)!}{(j_s-2)! \cdot (n_{ik}+j_s+1)!}$$

$$\frac{(n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}-l_{k_2}-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i-l_{k_2})!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_s, \dots, \mathbb{k}_2, j_s\} \wedge$$

$$s > 1 \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_i+n-D-s)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - \mathbf{n} - 1)! \cdot (n - j_i)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l_i - 1)!}{(l_s - j_s - l_i + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + l_i - \mathbf{n} - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)} \\
& \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}
\end{aligned}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{j_i = j_{ik} + s - 1}^{(j_i = j_{ik} + s - j_{sa}^{ik})}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_{ik} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} \sum_{k=l}^{(l_i - D - s)} \sum_{j_{ik}=j_s + s}^{(l_i - l + 1)} \sum_{n_i=n+\mathbb{k}}^{(n_i - j_s + 1)} \sum_{n_{ik}=n+\mathbb{k}_2 - j_{ik} + 1}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\begin{aligned}
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{ik}^k)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{is}+j_s-j_{ik}}^{(n_i+j_{ik}-j_i-k_2)} \\
 & \sum_{n_{ik}=n+k_2-1}^{(n_i-j_i+1)} \sum_{(n_s=n-j_i+1)}^{(n_i-j_i+1)} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}+j_s-j_{ik}-1)!} \\
 & \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-k_1)!} \\
 & \frac{(n_{ik}-n_{ik}-k_2-1)!}{(j_i-j_s-1)! \cdot (n_{is}+j_{ik}-n_s-j_i-k_2)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - 1)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_s - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - 1 = l \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

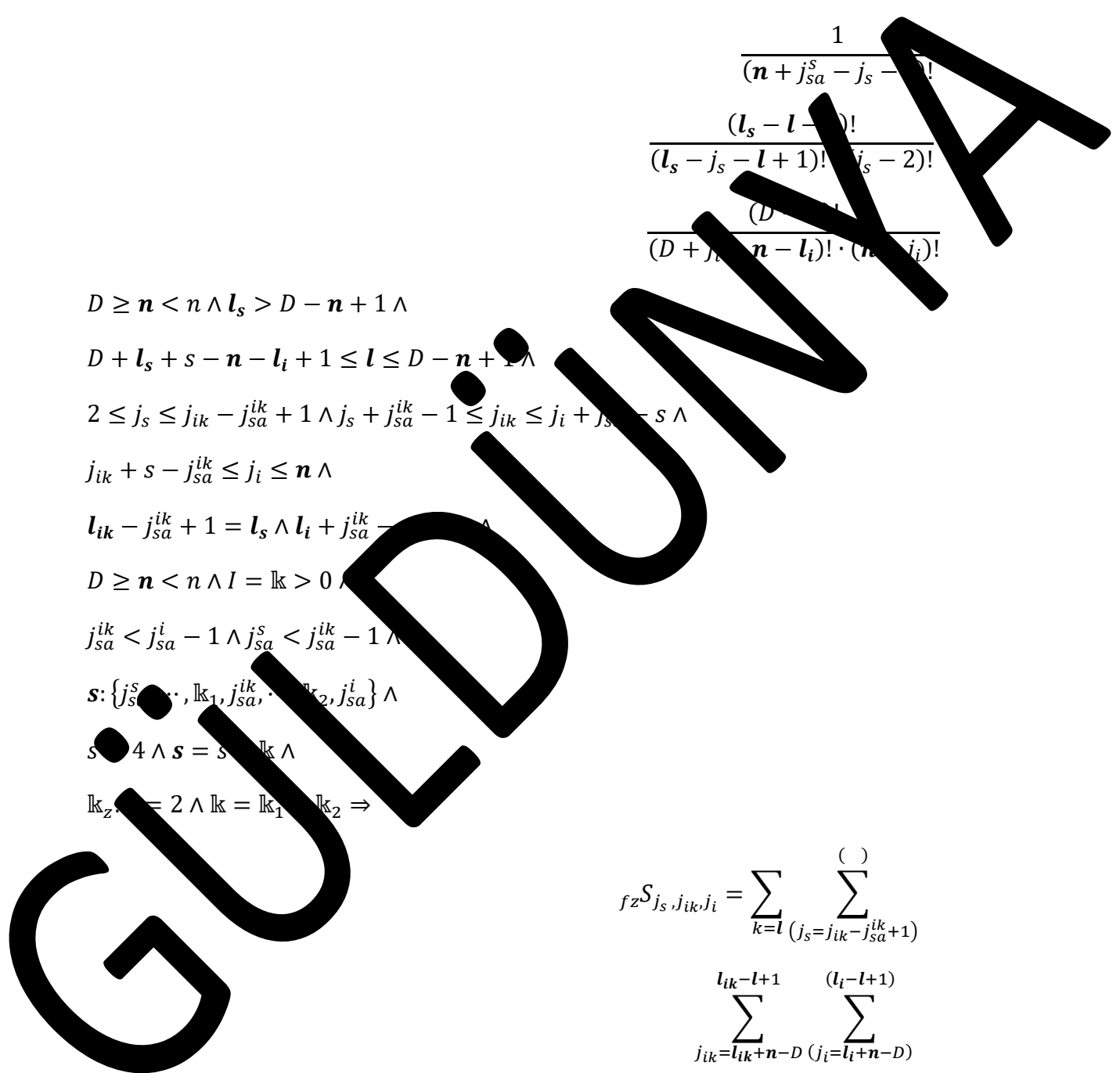
$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_s^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$

$s \geq 4 \wedge s = s - \mathbb{k} \wedge$

$\mathbb{k}_z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1}} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{j_i=l_i+n-D}^{(l_i-l+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{is}=n+\mathbb{k}-j_s+1}}^{(n_i-j_s+1)}$$



$$\sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 1)!}{(l_s + j_s - l - 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa} - j_{ik} - s)!} \cdot$$

$$\frac{(D - l_i)!}{(D + l_i - \mathbf{n} - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=l_i+\mathbf{n}+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot$$

$$\frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{( )}$$

$$\sum_{j_{ik} = l_s + n + j_{sa}^{ik} - D - 1}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = l_i + n - D)}^{(l_i - l + 1)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_{sa}^{ik} = l_i}^{l_s + j_s - l} \sum_{j_{ik} = l_i}^{j_{sa}^{ik} - D - s} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(n - j_{sa}^{ik} + 1)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(n - j_{sa}^{ik} + 1)} \\
& \frac{(n_{ik} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_{ik})} \sum_{(j_s^{ik} + n - D - j_{sa}^{ik} + 1)}^{(l_{ik})} \sum_{j_{ik} = j_{sa}^{ik} - 1}^{(l_{ik})} \sum_{(j_i = l_i + n - D)}^{(l_{ik})} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=l}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{(j_s = l_i + n - D - s + 1)}^{(l_{ik} - l - j_{sa}^{ik} + 2)} \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{(j_s + j_{sa}^{ik} - 1)} \sum_{(j_i = j_s - j_{sa}^{ik})}^{(j_s - j_{sa}^{ik})} \sum_{(n_{is} = n_{is} + \mathbb{k}_1)}^{(n_{is} + \mathbb{k}_1 + 1)} \sum_{(n_{ik} = n_{is} + j_{ik} - \mathbb{k}_1)}^{(n_{is} + j_{ik} - \mathbb{k}_1)} \sum_{(j_i = \mathbb{k}_2)}^{(j_i - \mathbb{k}_2)} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = D - n - 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n$$

$$l_{ik} - \mathbb{k}_1 + 1 \geq j_s + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{ik} < j_i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - D)}^{(j_{ik} - j_{sa}^{ik} + 1)} \\
 &\sum_{j_{ik} = j_i + j_{sa}^{ik} - s}^{(l_s + s - l)} \sum_{(j_i = l_i + n - \dots)}^{(l_s + s - l)} \\
 &\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
 &\sum_{n_{ik} = n + k_2 - \dots}^{n_{is} + j_s - j_{ik} - \dots} \sum_{(n_s = n - j_i + \dots)}^{(n_i - j_s + 1)} \\
 &\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_i - n_{ik} - j_s + 1)!} \\
 &\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 &\frac{(n_{ik} - \dots - k_2 - 1)!}{(j_i - \dots - 1)! \cdot (n_{is} + j_{ik} - n_s - j_i - k_2)!} \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 &\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}^{(l_s - l + 1)} \\
 &\sum_{j_{ik} = j_i + j_{sa}^{ik} - s}^{(l_i - l + 1)} \sum_{(j_i = l_s + s - l + 1)}^{(l_i - l + 1)} \\
 &\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)}
 \end{aligned}$$

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$$\frac{\sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + \mathbf{n} - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+\mathbf{n}-D)}^{( )}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{( )} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot$$

$$\frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!} \cdot$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{()}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\begin{aligned}
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(l_s+1)} \sum_{(j_s=l_s+n-k)}^{(l_s+1)} \sum_{(j_{ik}=j_{sa}^{ik}-l+1)}^{(j_{ik}-l-s+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(j_i)} \sum_{(n_i=n+l_k)}^{(n_i-j_s+1)} \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+l_k-j_{ik}-l_1)}^{(n_{ik}+j_{ik}-j_i-l_1)} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - l_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_1)!} \cdot \\
& \frac{(n_{ik} - n_s - l_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
\end{aligned}$$



$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\cdot)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n_{ik}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{(\cdot)} \sum_{(n_{ik}=n_{ik}+j_{ik}-j_i-j_{sa}^{ik})}^{(\cdot)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + j_{sa}^{ik} + j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} + l_{k_1} - j_i - j_{sa}^{ik} - j_{sa}^{ik})!}$$

$$\frac{1}{(l_s + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 < j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i - n \wedge$

$l_{ik} - j_s + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$D \geq n < n \wedge l_k > l_s$

$j_{sa}^{ik} > j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$

$s > 1 \wedge s = s + l_k \wedge$

$l_{k_z}: z = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=l_s+n-D)}^{(l_i+n-D-s)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-l-s+1} \binom{(\quad)}{\quad} \\
 & \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-k_1)} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-k_1)!} \\
 & \frac{(n_{ik}-k_2-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_s-j_i-k_2)!} \cdot \frac{(n_s-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{j_s=l_i+n-D-s+1}^{(n_i-j_s+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_i+j_{sa}^{ik}-l-s+1} \binom{(\quad)}{\quad} \\
 & \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-k_2)}
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)!} \cdot (n - j_i)! \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)} \\
& \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f^{z^j} = \sum_{k=l}^{j_{ik} - j_{sa}^{ik} + 1} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{(l_s + s - l)}^{j_{ik} = j_i + j_{sa}^{ik} - s} \sum_{(j_i = l_{ik} + n + s - D - j_{sa}^{ik})}$$

$$\sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-l)}$$

$$(l_{ik} + s - j_{sa}^{ik} + 1)$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-s} \sum_{(j_s=l_s+n-l)}$$

$$(n_i - j_s + 1)$$

$$\sum_{(n_{ik} + l_{k_1} + l_{k_2} - j_s + 1)}$$

$$n_{is} + j_s - i_{ik} - l_{k_1} \quad (n_{ik} - j_i - l_{k_2})$$

$$\sum_{(n_{ik} + l_{k_2} - j_{ik})} \sum_{(n_s = n - j_i + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

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$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}^{(l_s+s-l)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - 2)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - n - 2)! \cdot (j_{sa}^k)!}$$

$$\frac{1}{(n - n_{is} - j_s - s)!}$$

$$\frac{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}{(l_s - j_s - l)!}$$

$$\frac{(j_i - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s - j_{sa}^{ik} - 1 \leq j_{ik} - j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{ik} - j_{sa}^{ik} - s = l_{ik}$$

$$D \geq n < n \wedge l_s - l_{ik} > 0 \wedge$$

$$j_{sa}^{ik} < j_i - 1 \wedge j_{sa}^s < j_{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, l_{k_1}, j_{sa}^i\} \wedge$$

$$s > j_{sa}^s = s + l_{k_1} \wedge$$

$$l_{k_z}: z = 2 \wedge l_{k_z} = l_{k_1} + l_{k_2} \Rightarrow$$

$$f_z^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)}$$

$$\frac{\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_{ik} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \sum_{j_{ik}=l_s+j_{sa}^{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)} \frac{\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_{ik} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - 1)! \cdot (j_{ik} - j_s - 1)!}$$

$$\frac{(D - l_i)!}{(n - l_i - 1)! \cdot (n - j_i)!}$$

$$\sum_{s=1}^l \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_{ik}-j_{sa}^{ik}}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_{sa}^{ik}-1} \sum_{j_i=j_{ik}+s-j_{sa}^{ik}}^{j_{sa}^{ik}-1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(j_{ik}-j_s-1)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$



$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned} & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\ & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\ & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \end{aligned}$$

$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_{ik} + n - D - j_{sa}^{ik} + 1)}^{(l_s - l + 1)} \\
 & \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{l_{ik} - l + 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{( )} \\
 & \sum_{n+l_k}^n \sum_{(n_{is} = n - l_{ik} + 1)}^{(n_{is} - l_{ik} + 1)} \\
 & \sum_{n_{ik} + l_{k_2} - j_{ik}}^{n_{is} + j_s - j_{ik} - l_{k_1}} \sum_{(j_i + 1)}^{(n_{ik} + j_{ik} - j_i - l_{k_2})} \\
 & \frac{(n_{is} - l_{ik} - l_{k_1} - 1)!}{(j_i - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - l_{ik} - l_{k_2} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} - \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_{ik} + n - D - j_{sa}^{ik} + 1)}^{(l_s - l + 1)} \\
 & \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{( )} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{( )}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$D + l_s + s - n - l_i + 1 \leq l \leq D - n +$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + 1 \leq j_{ik} \leq j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_i \wedge l_i + j_{sa}^{ik} - s \leq l_{ik} \wedge$

$D \geq n < n \wedge l = \mathbb{k} - 0 \wedge$

$j_{sa}^i < j_{sa}^i - 1 \wedge j_{sa}^i < j_{sa}^{ik} - 1 \wedge$

$s: \{j_s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge j_s + s + \mathbb{k} \wedge$

$\mathbb{k}_z: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_2 \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\frac{\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(n_{is} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{\binom{()}{}}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+n-D)}^{\binom{()}{}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{\binom{()}{}}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = l_i + n + j_{sa}^{ik} - l - s + 1}^{(l_i + j_{sa}^{ik} - l - s + 1)} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{(l_s - l + 1)} \sum_{l_i = D - s + 1}^{(l_s - l + 1)}$$

$$\sum_{j_s = j_s + j_{sa}^{ik} - 1}^{(j_s - l)} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(j_s - l)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(n_s - l_i)}$$

$$\frac{(n_s + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_s + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}} = \sum_{l=1}^n \sum_{(j_s=l_s+n-D)}^{(l+s)} \sum_{(j_{sa}^{ik}+1)}^{(l+s)} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}^{(l+s)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_{ik}+l_i-D-j_{sa}^{ik})}$$

$$\sum_{n+l_k}^{(n_i+l_k+1)} \sum_{(n_{is}=n_i+l_k+1)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{ik} - n_s - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = D - n - 1 \wedge$$

$$D + l_s + s - n - l_i - 1 \leq l \leq n - n + 1 \wedge$$

$$l \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j_i \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$n \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$



$$fzS_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{ik}^i)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-1}^{n_{is}+j_s-j_{ik}} \sum_{(n_{is}+j_{ik}-n_{ik}-k_2)}^{(n_{is}+j_{ik}-n_{ik}-k_2)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{ik} - k_2 - 1)!}{(j_i - j_s - 1)! \cdot (n_{is} + j_{ik} - n_{is} - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{(\cdot)}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - \dots)!} \cdot \frac{(l_s - l - \dots)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \dots)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k}$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_s + 1)!}{(j_s + l_{ik} - j_s - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_{ik} - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}^{(l_s - l + 1)} \\
& \sum_{j_{ik} = l_{ik} + n - D}^{l_{ik} - l + 1} \sum_{(j_i = l_s + s - l + 1)}^{(l_i - l + 1)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=0}^{( )} \sum_{j_{sa}^{ik+1}}^{( )} \\
& \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+n-D)}^{( )} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{( )} \sum_{(n_s=n_{ik}+j_{ik}-j_i-k_2)}^{( )} \\
& \frac{(n_s + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_i, j_i} = \sum_{k=l}^{\sum_{j_s=l_s+1}^{(j_s - j_{sa}^{ik} + 1)}} \sum_{j_{ik}=l_{ik}+1}^{\sum_{l_i=l+1}^{(l_i - l + 1)}} \sum_{n_i=n+k}^{\sum_{n_{is}=n+k-j_s+1}^{(n_i - j_s + 1)}} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{\sum_{n_s=n-j_i+1}^{(n_{ik} + j_{ik} - j_i - k_2)}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = l_s + j_{sa}^{ik} - l + 1}^{l_{ik} - l + 1} \sum_{(j_{ik} = l_s + j_{sa}^{ik})}^{(l_i - l + 1)}$$

$$\sum_{k=1}^n \sum_{(n_{is} = n - k + 1)}$$

$$\sum_{(n_{ik} + j_{ik} - j_i - k_1)}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{ik} + j_{ik} - j_i - k_2)}^{(n_{ik} + j_{ik} - j_i - k_2)}$$

$$\frac{(n_{is} - k_1 - 1)! \cdot (n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - k_1 - 1)!}{(j_{ik} - k_1 - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{is} - k_2 - 1)!}{(j_i - k_2 - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{( )}$$

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$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_i)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{( )} \sum_{(n_s=n_{ik}+j_i-j_i-\mathbb{k}_2)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - 2) \cdot \dots \cdot 2 \cdot 1}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2) \cdot \dots \cdot (j_{sa}^s)!} \cdot \frac{1}{(n + j_s - j_s - s)!} \cdot \frac{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}{(j_s - l_i)!} \cdot \frac{1}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + \dots$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i < n \wedge$

$l_{ik} - j_{sa}^{ik} + \dots > l_s \wedge l_{ik} + j_{sa}^{ik} - s > l_{ik}$

$D \geq n < n \wedge l_s > 0 \wedge$

$j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, \mathbb{k}_z, j_{sa}^i\} \wedge$

$s > \dots = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \dots = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\begin{aligned}
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\
& \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \\
& \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_{ik} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
& \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}
\end{aligned}$$



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$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)} \\
 & \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{( )} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_{zS}^j_{ik, j_i} &= \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)} \\ &\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\ &\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\ &\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\ &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{j_s = j_{ik} - j_{sa}^{ik} + 1}^{l_s + s - l} \sum_{j_{ik} = j_i + j_{sa}^{ik} - s}^{n} \sum_{n_i = n + k}^{(n_i - j_s + 1)} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}^{(n_s = n_{ik} + j_{ik} - j_i - k_2)} \frac{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$l_s \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{j_s} \sum_{j_i=j_{ik}+1}^{j_s+1} \sum_{j_i+j_{sa}^{ik}=j_{ik}+s-l-j_{sa}^{ik}+1} \sum_{j_{sa}^{ik}=j_{sa}^i+1}^{j_{sa}^i} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{j_{ik}-\mathbb{k}_1} \sum_{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=l_{ik}+s-l-j_{sa}^{ik}+1)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$n_{is}+j_s-j_{ik} \dots + j_{ik} \dots - l_{k_2}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1} \sum_{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_s - j_i + 1)!}$$

$$\frac{(n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - l_{k_2} - 1)!}{(j_i - j_s - 1)! \cdot (n_{is} + j_{ik} - n_s - j_i - l_{k_2})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \sum_{(j_i=s+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_1})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^{j_s})!}$$

$$\frac{(j_{sa}^{j_s} - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{j_s} + 1 \wedge j_s + j_{sa}^{j_s} - 1 \leq j_{ik} < j_i + j_{sa}^{j_s} - s$$

$$j_{ik} + s - j_{sa}^{j_s} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{j_s} + 1 = l_s \wedge l_i + j_{sa}^{j_s} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = l_{k_1} = 0 \wedge$$

$$j_{sa}^{j_s} < j_{sa}^{j_s} - 1 \wedge j_{sa}^{j_s} < j_{sa}^{j_s} - 1 \wedge$$

$$s: \{j_s, \dots, l_{k_1}, j_{sa}^{j_s}, \dots, j_{sa}^{j_s}\} \wedge$$

$$s > 4 \wedge s > s + l_k \wedge$$

$$l_{k_2}: z > 2 \wedge l_{k_2} = l_{k_2} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{j_s}+1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{j_s}+1}^{j_i+j_{sa}^{j_s}-s} \sum_{(j_i=s+1)}^{(l_s+s-l)}$$

$$\frac{\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{\binom{()}{}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

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$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - j_i - s)!}{(j_{ik} + l_i - j_i - l_{ik} - j_i + j_{sa}^{ik} - s)!} \cdot \frac{(D - l_i)!}{(n - l_i - 1)! \cdot (n - j_i)!} \cdot \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^n \sum_{j_i=j_{ik}+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{\binom{(\cdot)}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$



$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz_{j_s, l_i} = \sum_{k=l}^{( )} (j_s = j_{ik} - j_{sa}^{ik} + 1)$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_s=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_s=j_{sa}^{ik})}$$

$$\sum_{l_{ik}}^{(n_i-j_s+1)} \sum_{(n_{ik}+l_{ik}-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}-j_{ik}-l_{k_1}} \sum_{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_{is} + n_{ik} - j_{ik} + l_{k_1} - n_{ik} - j_i - s - 2 \cdot l_{k_2})!}{(n_{is} + n_{ik} - j_{is} + j_{ik} + l_{k_1} - n_{ik} - j_i - n - 2 \cdot l_{k_2} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l \leq D - n + 1 \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_s - j_{sa}^{ik} = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = l_{k_1} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$s > 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

$$\sum_{n_i=n_{ik}+\mathbb{k}}^{(n_i-1)}$$

$$\sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-1)}$$

$$\sum_{(n_{ik}=n_s-j_{ik}+1)}^{(n_s-j_i+1)}$$

$$\frac{(n_{ik} - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_s - 1)! \cdot (n_s + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - \mathbb{k} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_1})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!} \cdot$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - 1)!} \cdot$$

$$\frac{(n + j_i - n)!}{(n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = l_k = 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s \leq s + l_k \wedge$$

$$l_{k_2}: z \geq 2 \wedge l_k = l_{k_2} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=2)} \\
& \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot
\end{aligned}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 =$$

$$f_z^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i - l + 1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{n_{is} = n + \mathbb{k} - j_s + 1}^{(n_i - j_s + 1)} \sum_{j_s = 2}^{(l_s - l + 1)} \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{(j_i + j_{sa}^{ik} - j_{ik} - s)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_s + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_s=j_{ik}-j_{sa}^{ik}+1} \sum_{j_i=j_{sa}^i-1}^{j_i=j_{sa}^i-1} \sum_{j_{ik}=j_i+1}^{j_{ik}=j_i+1} \sum_{j_i=l_i+n-D}^{j_i=l_i+n-D} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{n_i-j_s+1} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_s=n-j_i+1}^{n_{ik}+j_{ik}-j_i-k_2} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$



$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=l_{ik}+l-j_{sa}^{ik}+2)}^{(l_i-l+1)}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_k+1)}^{(n_{is}+1)}$$

$$\sum_{n_{ik}+l_{k_2}-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_{is} - n_{is} - 1)!}{(j_i - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{is} - l_{k_1} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \sum_{(j_i=l_i+n-D)}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_k)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{ik} + s - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge I = l_{k_1} = 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s \leq s + l_k \wedge$$

$$l_{k_2}: z \geq 2 \wedge l_k = l_{k_2} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)}$$

$$\frac{\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{ik} - l_{k_1} - s)!}{(j_{ik} + l_{k_1} - j_i - l_{k_1})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^j \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

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$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_i - s)!}{(j_{ik} + l_i - j_i - l_{ik} - s)! \cdot (j_i + j_{sa}^{ik} - s)!} \cdot \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^n \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(n_i-j_s+1)} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, \dots, j_i} = \sum_{k=l}^{( )} (j_s = j_{ik} - j_{sa}^{ik} + 1)$$

$$\sum_{k=j_{sa}^{ik}+1}^{n+j_{sa}^{ik}-D} (l_i - l + 1) \sum_{(j_i = l_i + n - D)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_{ik} - l + 1} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(l + 1)}$$

$$\sum_{(n_i - j_s + 1)} \sum_{(n_{ik} + l_k - j_s + 1)}$$

$$\sum_{(n_{is} + j_{ik} - l_{k_1})} \sum_{(n_{ik} - j_i - l_{k_2})}$$

$$\sum_{(n_{is} + l_{k_2} - j_{ik})} \sum_{(n_s = n - j_i + 1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

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$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{( )} \sum_{(n_s=n_{ik}+l_{k_1}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - 2 \cdot \dots)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - l_{k_2} - n - 2 \cdot \dots)! \cdot (j_{sa}^s)!} \cdot \frac{1}{(n_{is} + j_s - j_s - s)!} \cdot \frac{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}{(l_s - j_s - l)!} \cdot \frac{(j_i - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq \dots = n + 1$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq \dots + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + \dots = l_s \wedge l_{ik} + j_{sa}^{ik} - s > l_{ik}$$

$$D + s - n < l_i \leq D + l_{ik} - n - j_{sa}^{ik} \wedge$$

$$D \geq \dots < n \wedge l = l_k > \dots \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - \dots \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^{ik}, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = \dots + l_k \wedge$$

$$l_k \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_1})} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-l_{k_2}-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_s-j_i-l_{k_2})!} \cdot \\
 & \frac{(n_s-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_i+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{\binom{)}{}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{\binom{)}{}} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\frac{\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} (n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(j_s - l + 1) \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-k_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} f_z S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)} \\ &\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\ &\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \\ &\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \end{aligned}$$

$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{j_s=l_i+n-D-s}^{(l_i-l-s+2)} \sum_{j_{ik}=j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{n_i=n+l_k}^{(n_i-j_s+1)} \sum_{n_{is}=n+l_k-j_s+1}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-l-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_k}^{( )} \sum_{(n_{ik}=n_{is}+j_{ik}-j_i-l_k)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} + l_{k_1} - j_i - l_k - j_{sa}^s)!} \cdot \frac{1}{(j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq 1 \wedge l_s \leq D - n - 1 \wedge$$

$$1 < j_s \leq j_{ik} + j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i - n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_s \leq D + j_{sa}^{ik} + s - n - j_{sa}^{ik} \wedge$$

$$D > n - n \wedge I = l_k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^{i-1}, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + l_k \wedge$$

$$l_{k_z}: z = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

$$\begin{aligned}
 f z^S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{(l_i+n-D-s)} \\
 &\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 &\sum_{n_{is}+j_s-j_{ik}}^{(n_{ik}+j_{ik}-i-k_2)} \\
 &\sum_{n_{ik}=n+k_2-1}^{(n_s-n-j_i+1)} \\
 &\frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \\
 &\frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \\
 &\frac{(n_{ik}-n_{ik}-k_2-1)!}{(j_i-j_s-1)! \cdot (n_{is}+j_{ik}-n_s-j_i-k_2)!} \\
 &\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 &\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 &\frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \\
 &\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 &\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 &\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + \mathbf{n} - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=1}^{(l_s - l + 1)} \sum_{(j_s = l_i + \mathbf{n} - D - s + 1)} \\
 & \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{(\quad)} \\
 & \sum_{n_i = \mathbf{n} + \mathbb{k}}^n \sum_{(n_{is} = \mathbf{n} + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(\quad)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!}
 \end{aligned}$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i \wedge l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$$

$$f_{zS}^{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{j_{sa}^{ik} = l_{ik} + j_{sa}^{ik} - D - s}^{(j_i - j_{ik} - 1)} \sum_{j_i = j_{ik} + s - j_{sa}^{ik}}^{(n - j_s + 1)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_s = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_s + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(n_s + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!} \\
& \frac{(n_s + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_s + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$



$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{ik} + s - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned}
 &= \sum_{j_{ik}=j_{sa}^{ik}+1}^{(i)} \sum_{j_i=j_{sa}^{ik}+1}^{(i)} \\
 &= \sum_{j_{ik}=j_{sa}^{ik}+1}^{n} \sum_{j_i=l_i+n-D}^{(l_i-l+1)} \\
 &= \sum_{n_i=n+k}^n \sum_{(n_i=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 &= \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 &= \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\
 &= \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 &= \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \\
 &= \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &= \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 &= \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}
 \end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\cdot)}$$

$$\sum_{n+l_k}^{n+l_k} \sum_{(n_i=n+l_k+1)}$$

$$\sum_{(j_i=j_{ik}-l_k)}^{(\cdot)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - n_s - \dots - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - \dots - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l = l \wedge l_s = D - n - 1 \wedge$$

$$D + l_s + s - n - l_i + \dots \leq l \leq l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge l_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + \dots \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + \dots = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$\dots < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = l > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$s > 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=2)}^{(l_i-l+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(l_i-l+1)} \sum_{(j_i=n-D)}^{(n_i-l+1)} \sum_{n_{ik}=\dots}^{(n_{is}+n+\mathbb{k}-j_s-1)} \dots \frac{(n_{is}-n_{ik}-\mathbb{k}_1-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-\mathbb{k}_1-1)!}{(n_{is}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-\mathbb{k}_1)!} \cdot \frac{(n_{ik}-n_s-\mathbb{k}_2-1)!}{(j_i-n_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i-\mathbb{k}_2)!} \cdot \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \cdot \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \cdot \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}^{( )} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_1})}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!} \cdot$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge I = l_{k_1} = 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s \leq s + l_k \wedge$$

$$l_{k_2}: z \geq 2 \wedge l_k = l_{k_2} \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=s+1)}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_{ik} + l_{ik} - j_{sa}^{ik} + 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)} \\
& \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_i-l+1)} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
\end{aligned}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - l_s + 1)!} \cdot \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \sum_{j_s=1}^n \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{j_s+1} \sum_{j_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{\binom{(\cdot)}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{\dots} = \sum_{k=l}^{j_{ik}-j_{sa}^{ik}+1} \sum_{(j_s=2)}$$

$$\sum_{ik=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = 2)}$$

$$\sum_{j_{ik} = l_s + j_{sa}^{ik} - l + 1}^{l_{ik} - l + 1} \sum_{(j_{ik} = j_{sa}^{ik})}$$

$$\sum_{(n_i - j_s + 1)} \sum_{(n_i + k - j_s + 1)}$$

$$\sum_{(n_i + k - j_{ik} - l_1)} \sum_{(n_i + k - j_{ik} - l_2)} \sum_{(n_s = n - j_i + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_1 - 1)!}{(j_{ik} - l_1 - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_1)!}$$

$$\frac{(n_{ik} - n_s - l_2 - 1)!}{(j_{ik} - l_2 - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{( )}$$

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$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_i)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{( )} \sum_{(n_s=n_{ik}+j_i-j_i-\mathbb{k}_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - 2) \cdot \dots \cdot 2 \cdot 1}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2) \cdot \dots \cdot (j_{sa}^s)!}$$

$$\frac{1}{(n + j_s - j_s - s)!}$$

$$\frac{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(j_i - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq j_i \wedge l_s \leq j_i - n + 1$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_{sa}^{ik} < n \wedge$$

$$l_i - j_{sa}^{ik} + j_{sa}^{ik} \geq l_s \wedge l_i - j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - j_{sa}^{ik}$$

$$D \geq l_{ik} < n \wedge l = \mathbb{k} > l_s \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^i, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = j_{sa}^i + \mathbb{k} \wedge$$

$$\mathbb{k}_2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-l+1} \binom{(\quad)}{j_i=j_{ik}+s-j_{sa}^{ik}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_1})}$$

$$\frac{\binom{n_i-1}{j_s-2} \cdot (n_i-n_{is}+1)!}{(n_i-n_{ik}-l_{k_1}-1)!}$$

$$\frac{(j_{ik}-j_s-1)! \cdot (n_{is}-n_{ik}-j_{ik}-l_{k_1})!}{(j_i-j_{ik}-l_{k_2})! \cdot (n_{ik}+j_{ik}-n_s-j_i-l_{k_2})!}$$

$$\frac{(n_{ik}-j_{ik}-l_{k_2})!}{(n_s-j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-j_s-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \binom{(\quad)}{j_i=j_{ik}+s-j_{sa}^{ik}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \binom{(\quad)}{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}$$

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$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! (n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

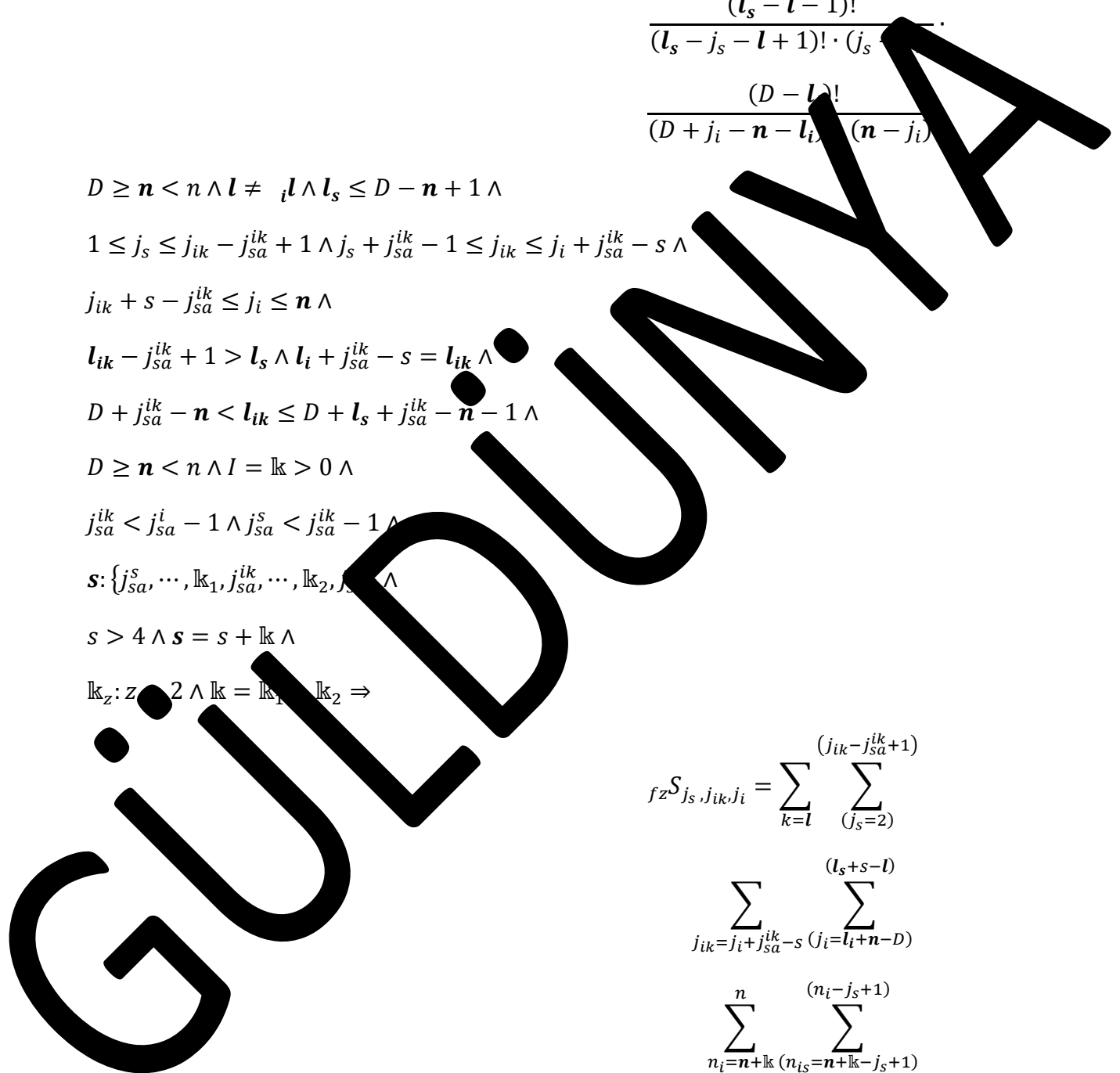
$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^{ik}\} \wedge$

$s > 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_2: z \cdot 2 \wedge \mathbb{k} = \mathbb{k}_1 \cdot \mathbb{k}_2 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)} \sum_{j_{ik}=j_i + j_{sa}^{ik} - s}^{(l_s + s - l)} \sum_{(j_i=l_i + n - D)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i - j_s + 1)} \sum_{n_{ik}=n+\mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$



$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l - 1)!}{(l_s - l + 1)! \cdot (l - 2)!} \cdot \\
& \frac{(l_{jk} - l_s - j_{sa} + 1)!}{(j_s + l_{jk} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_s)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
& \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)} \\
& \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_i - l + 1)} \sum_{(j_i=l_s+s-l+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot
\end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=l}^{( )} \sum_{j_s=j_{ik}+j_{sa}^{ik}+1}^{( )} \sum_{j_{ik}=j_i+j_s}^{( )} \sum_{j_i=l_i+n-D}^{( )} \sum_{n_{is}=n+l_k-j_s+1}^{( )} \sum_{n_{is}=n+l_k-j_s+1}^{( )} \sum_{n_s=n_{ik}+j_{ik}-j_i-l_{k_2}}^{( )} \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + l_k + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > l_s \wedge n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik})} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik})} \dots$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-l}^{l_s+j_{sa}^{ik}-l} \dots$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \dots$$

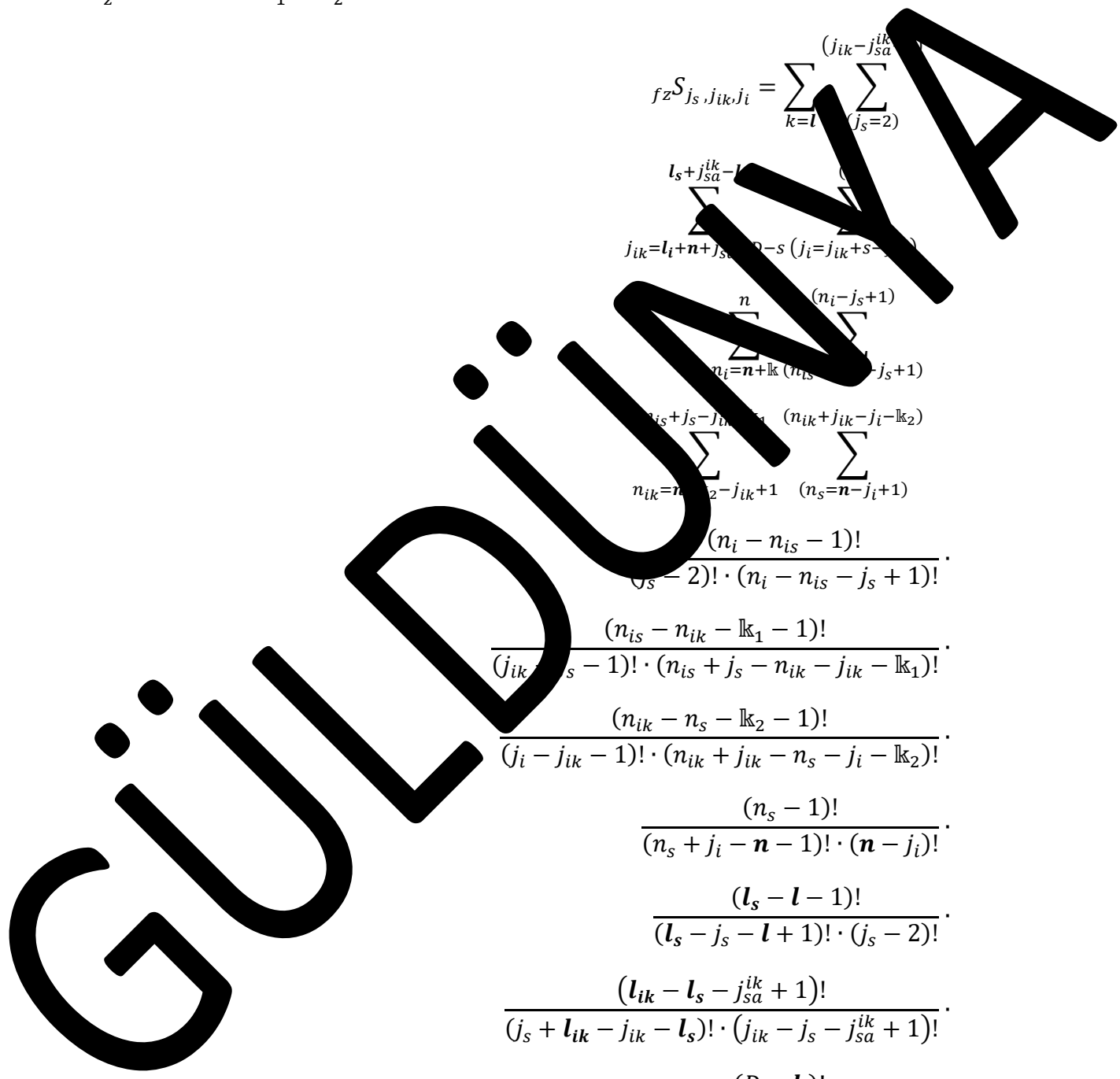
$$\sum_{n_{ik}=n_{i_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$



$$\begin{aligned}
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-l+1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=j_{ik}+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_1)} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1)!} \\
 & \frac{(n_{ik}-\mathbb{k}_2-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_s-j_i-\mathbb{k}_2)!} \cdot \frac{(n_s-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \sum_{k=l}^{\sum} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - \dots)!} \cdot \frac{(l_s - l - \dots)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - \dots)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} - j_s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + \dots - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-l-s+1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{\binom{()}{j_i=j_{ik}+s-j_{sa}^{ik}}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$



$$\begin{aligned}
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - k_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-l-s+1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}
 \end{aligned}$$

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$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l)!}{(D + j_i - n - l)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{(l_s - l + 1)} \sum_{l_i=0}^{D - s + 1}$$

$$\sum_{j_s = j_s + j_{sa}^{ik} - 1}^{(j_i - l + 1)} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_s = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_s + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_s + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

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$$fz^S_{j_s, j_{ik}} = \sum_{l=1}^{\mathbb{k}+1} \sum_{(j_s=2)}^{(l_s-1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}^{(l_s - l + 1)} \\
 & \sum_{j_{ik}=j_i + j_{s_a}^{lk} - s}^{(l_{ik} + s - l - j_{s_a}^{lk})} \sum_{(j_i = l_{ik} + s - l + 1)}^{(n_i - l_{ik} + 1)} \\
 & \sum_{n+l_k}^n \sum_{(n_{is} = n - l_{ik} - l + 1)}^{(n_i - l_{ik} + 1)} \\
 & \sum_{n_{is} + j_s - j_{ik} - l_{k_1}}^{(n_{ik} + j_{ik} - j_i - l_{k_2})} \sum_{(j_i = j_{ik} + l_{k_2} - j_{ik})}^{(n_i - l_{ik} + 1)} \\
 & \frac{(n_{is} - n - l_{k_1} - 1)!}{(j_{ik} - j_i - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{is} - n - l_{k_2} - 1)!}{(n_{ik} - n_s - l_{k_2} - 1)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{s_a}^{lk} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{s_a}^{lk} + 1)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} - \\
 & \sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{s_a}^{lk} + 1)}^{( )} \\
 & \sum_{j_{ik} = j_i + j_{s_a}^{lk} - s}^{(l_s + s - l)} \sum_{(j_i = l_{ik} + n + s - D - j_{s_a}^{lk})}^{( )}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(D - n)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$D + s - n < l_i \leq D + l_s + s - 1 \wedge$

$D \geq n < n \wedge l = \mathbb{k} = 0 \wedge$

$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$

$s: \{j_s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge s \leq s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_2 \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_{ik} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}
 \end{aligned}$$

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$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - l_s + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \sum_{s=1}^n \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_{sa}^{ik}-1} \sum_{j_{ik}=l_{ik}+n-D}^{+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_s=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(n_i-j_s+1)} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned} f_{z^s} S_{j_s, \dots, j_i} &= \sum_{k=l}^{\binom{n-D-j_{sa}^{ik}}{(j_s=2)}} \\ &\sum_{j_i=l_{ik}+n-D}^{\binom{l_{ik}-l+1}{(j_i=j_{ik}+s-j_{sa}^{ik})}} \sum_{n_i=n+k}^{\binom{n_i-j_s+1}{(n_i=n+k-j_s+1)}} \\ &\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\ &\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \\ &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\ &\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \end{aligned}$$



$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=i+j_{sa}^{ik}-1}^{l_{ik}-l+1} \dots \sum_{(j_{sa}^{ik})}$$

$$\sum_{(n_i-j_s+1)} \dots \sum_{(n_{ik}+l_k-j_s+1)}$$

$$\sum_{(n_{is}+j_{ik}-l_{k_1})} \dots \sum_{(n_{ik}-j_{i-l_{k_2}})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - n_{is} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_{ik} - n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}$$

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$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})} \sum_{n_i=n+l}^n \sum_{(n_s=n+l-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_s-j_i-l_{k_2})} \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - 2 \cdot \dots)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - \dots - n - 2 \cdot \dots)!} \cdot \frac{1}{(n_{is} + j_s - j_s - s)!} \cdot \frac{(l_s - \dots - l + 1)! \cdot (j_s - 2)!}{(l_s - \dots - l)!} \cdot \frac{(n - l_i)!}{(D_{j_i - n - l_i})! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq \dots = n + 1$$

$$D + l_s + s - n - l_i + 1 \leq \dots \wedge l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} \leq j_{ik} \leq \dots + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} < j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = l_k > \dots \wedge$$

$$j_{sa}^{ik} > j_s - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l\} \cup \{j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$$j_{sa}^{ik} = s + l_k \wedge$$

$$l_{k_z}: z = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

$$f_z^S j_s, j_{ik}, j_i = \sum_{k=l} \sum_{(j_s=2)}^{(l_s-l+1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_2}-1)!}{(j_{ik}-j_s-1)!(n_{is}-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-n_{ik}-l_{k_2}-1)!}{(j_i-j_{ik}-1)!(n_{ik}-j_{ik}-n_s-j_i-l_{k_2})!} \cdot \\
 & \frac{(n_i-1)!}{(n_s)!(j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=l} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}
 \end{aligned}$$

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$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(D - l)!}{(D + j_i - n - l_i)! (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i \wedge l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_s^{ik} \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \wedge$$

$$fz_{j_s, j_{ik}, j_i}^S = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - l)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{( )} \\
 & \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{( )} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)} \\ &\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})} \\ &\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\ &\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ &\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\ &\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\ &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \end{aligned}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=l_i}^{(l_i+1)} \frac{\binom{l_i+1}{k}}{\binom{l_i+1}{l_{ik}+n-j_{sa}^{ik}+1}} \cdot \sum_{j_s=j_s+j_{sa}^{ik}}^{l_i+1} \sum_{j_{ik}=j_{ik}+s-j_{sa}^{ik}}^{l_i+1} \sum_{n_{is}=n+l_k}^{n+l_k+l_i+1} \sum_{n_{ik}=n+l_k}^{n+l_k} \sum_{n_s=n+l_k-j_s+1}^{n+l_k} \sum_{n_{ik}+j_{ik}-l_{k_1}}^{( )} \sum_{n_s=n_{ik}+j_{ik}-j_i-l_{k_2}}^{( )} \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + l_k + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > l_i + n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 - j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=\mathbb{k}_1}^{\mathbb{k}_2} \sum_{j_s=2}^{(l_s-l+1)} \sum_{j_{ik}=\mathbb{k}_1}^{l+1} \sum_{j_i=j_{ik}+s-j_{sa}^{ik}}^{n-j_{ik}+\mathbb{k}_1} \sum_{n_{is}=\mathbb{k}_1}^{n_{is}+\mathbb{k}_2} \sum_{n_{ik}=\mathbb{k}_2-j_{ik}+1}^{n_{ik}+\mathbb{k}_2-j_{ik}-1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$



$$\begin{aligned}
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{()} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_k}^{()} \sum_{(n_{ik}=n_{is}+j_{ik}-j_i)}^{()} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_{ik} + \dots + l_{k1} - j_i - s - l_k - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n_{is} + n_{ik} + j_{ik} + \dots + j_{sa}^s - j_s - s)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$$\begin{aligned}
 & ((D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge \\
 & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge \\
 & j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n) \wedge \\
 & (l_k - j_{sa}^{ik} - 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge \\
 & l_i \leq D + s - n) \vee \\
 & (D \geq n < n \wedge l \neq i \wedge l_i \leq D + s - n \wedge \\
 & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge \\
 & j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n) \vee \\
 & (D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge \\
 & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge \\
 & j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n) \wedge
 \end{aligned}$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}} = \sum_{l=1}^{(j_s - \mathbb{k} + 1)} \sum_{(j_s=2)}^{(l_s + s - l)} \sum_{i_{ik}=j_{sa}^{ik}+1}^{(j_i - j_s + 1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i - j_s + 1)} \frac{n_{is} + j_s - j_{ik} - \mathbb{k}_1}{\sum_{n_{ik}=n+\mathbb{k}_2 - j_{ik} + 1}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

$$l_{ik} - l + 1$$

$$j_{ik} = j_{sa}^{ik} + \dots$$

$$(n_i - j_s + \dots)$$

$$\sum_{n+l} \sum_{(n+l-k-j_s+1)}$$

$$n_{is} + \dots j_{ik} - k_1 \dots j_i - k_2$$

$$\sum_{n+l-k_2-j_{ik}} \sum_{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - \dots)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - \dots - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(\dots - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

GÜLDENWA

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=s+1)}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_k}^{( )} \sum_{(n_{ik}+j_{ik}-j_i=...)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + \dots + j_i + l_{k1} - \dots - j_i - \dots - l_k - j_{sa}^s)!}$$

$$\frac{1}{+ j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$((D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_k - j_{sa}^{ik} - 1 > l_s \wedge l_i - j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n) \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}} = \sum_{l=1}^{l_s + j_s} \sum_{(j_s=2)}^{(j_s=l+1)} \sum_{j_{ik}=j_{ik}+1}^{j_{ik}+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(j_i=l+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_s + j_{sa}^{ik} - l + 1}^{l_{ik} - l + 1} \sum_{(j_s=2)}$$

$$\sum_{n+l_k}^{(n_i - j_s + 1)} \sum_{(n_i - j_s + 1)}$$

$$\sum_{n_i + l_k - j_{ik} - l_1}^{n_{is} + j_{ik} - l_1} \sum_{(n_i - j_s + 1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_1 - 1)!}{(j_{ik} - l_1 - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_1)!}$$

$$\frac{(n_{ik} - n_s - l_2 - 1)!}{(j_{ik} - l_2 - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

GÜLDÜZÜMÜYA

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\cdot)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n_{ik}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}} \sum_{(n_{ik}+j_{ik}-j_i-j_{sa}^{ik})}^{(\cdot)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + j_{sa}^{ik} - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{sa}^{ik} - j_i - l_{k1} - j_{sa}^{ik} - j_{sa}^{ik} - j_s)!} \cdot \frac{1}{(j_{sa}^{ik} - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_s - j_{sa}^{ik} - 1 > l_s \wedge l_i - j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$(D \geq n < n \wedge l_s \neq l_i \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, n, l_i} = \sum_{k=l}^{l+1} \sum_{(j_s=2)}^{l+1}$$

$$\sum_{j_{ik}=j_{sa}^{ik}-1}^{l+1} (j_i=j_{ik}+s-j_{sa}^{ik})$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$



$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik} = j_s + j_{sa}^{ik} - j_{ik} - j_{sa}^{ik}}$$

$$\sum_{n+l_k}^{(n_i - j_s + 1)} \sum_{(n_i + l_k - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} - j_{ik} - l_{k_1}} \sum_{n_{ik} + j_{ik} - j_i - l_{k_2}}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_i - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_i - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$(D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_i \leq j_{ik} - j_{sa}^{ik} \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$j_s - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}} = \sum_{l=1}^{j_s} \sum_{(j_s=2)}^{(j_s+1)} \sum_{j_{ik}=1}^{j_i} \sum_{(j_i=l+n-D)}^{(j_i+l+n-D)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n}^{l_{ik}-l+1} \sum_{(l_s=l+1)}$$

$$\sum_{(n_i - j_s + 1)} \sum_{(n + k - j_s + 1)}$$

$$\sum_{(n_s = n - j_i + 1)} \sum_{(j_i - k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_{ik} - j_i - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

GÜLDÜMBA

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+n-1)}^{(l_s+s-l)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_k}^{( )} \sum_{(n_{ik}+j_{ik}-j_i=n-1)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + \dots + j_i + l_{k1} - \dots - j_i - s - l_k - j_{sa}^s)!} \cdot \frac{1}{(j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$((D \geq n < n \wedge l_i \neq l_s \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_k - j_{sa}^{ik} - 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_i \neq l_s \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$D \geq n < n \wedge l_i = l_k > 0 \wedge$$

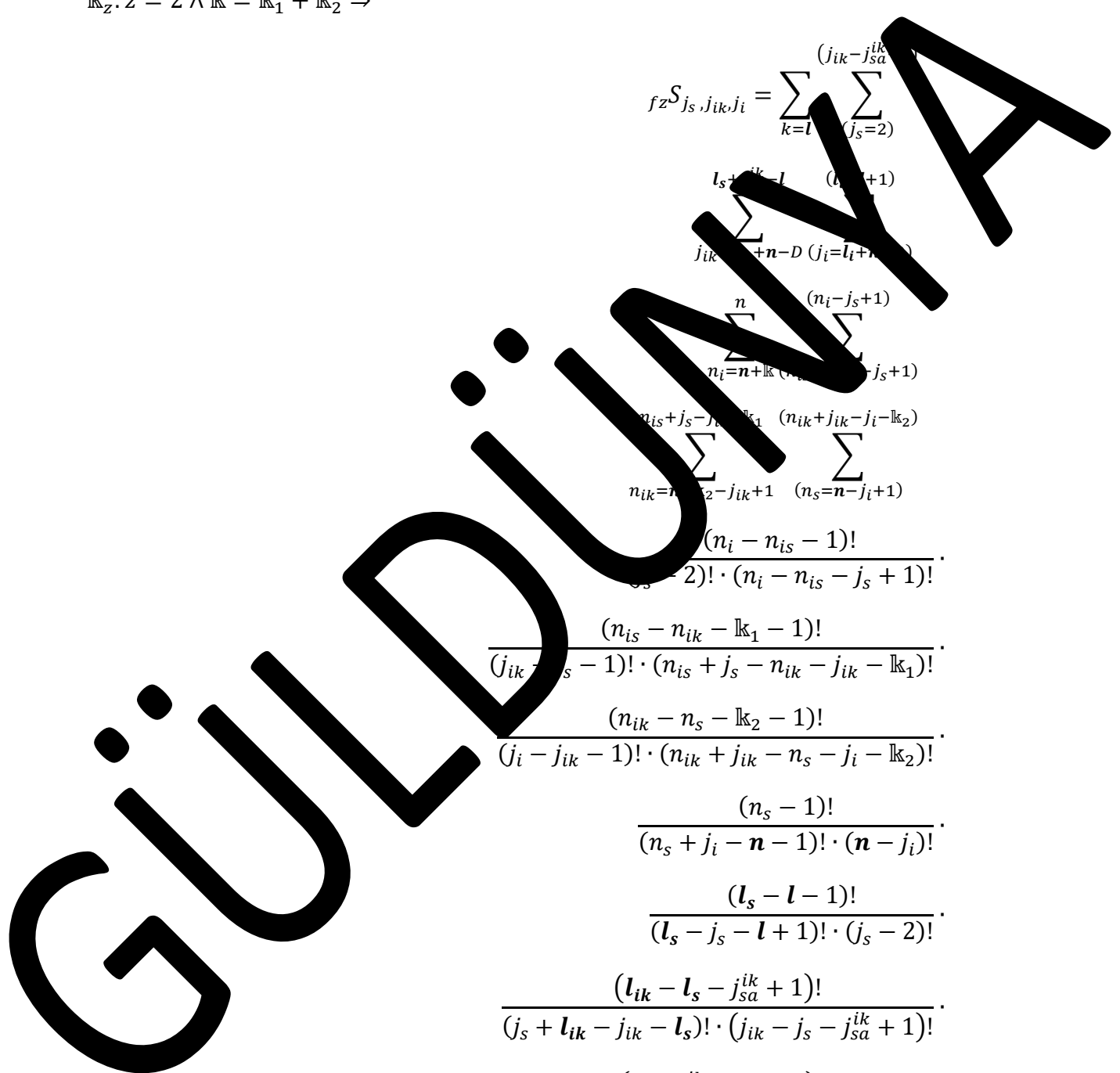
$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik})} \sum_{(j_s=2)}^{(j_s-1)} \sum_{l_s+l_k=l}^{(l_s+l_k-1)} \sum_{(l_s+l_k+1)}^{(l_s+l_k-1)} \sum_{j_{ik}+n-D}^{(j_i=l_i+l_s)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{(n_{is}+j_s-j_{ik}-\mathbb{k}_1)} \sum_{n_{ik}=n_{s_2}-j_{ik}+1}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$



$$\begin{aligned}
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-l+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j^{ik})}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n_{ik}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{is}+j_s-j_{ik}} \sum_{(n_{is}+j_{ik}-i-k_2)} \\
 & \sum_{n_{ik}=n+k_2-1} \sum_{(n_s=n-j_i)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_{ik} - k_2 - 1)!}{(j_i - k_2 - 1)! \cdot (n_{is} + j_{ik} - n_s - j_i - k_2)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \\
 & \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$$((D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned}
 f_{z^S}^{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)}^{(l_i+n-D-s)} \\
 &\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \\
 &\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n+l_{k_2}+1}^{n_{is}+j_s-j_{ik}} \sum_{(n_s=n-j_i-l_{k_2})}^{(n_{ik}+j_{ik}-l_{k_2})} \\
 &\frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}-n_{ik}-j_s+1)!} \\
 &\frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!} \\
 &\frac{(n_{ik}-n_{ik}-l_{k_2}-1)!}{(j_i-l_{k_2}-1)! \cdot (n_{is}+j_{ik}-n_s-j_i-l_{k_2})!} \\
 &\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 &\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 &\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 &\frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \\
 &\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 &\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 &\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{i_s}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)!} \cdot \\
 & \frac{(n - j_s - l - 1)!}{(n - j_s - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_{ik} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{( )} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-l_{k_1}}^{( )} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}
 \end{aligned}$$

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$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(D - l)!}{(D + j_i - n - l_i)! (n - j_i)!}$$

$$((D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i \wedge l - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik}$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l \neq i \wedge l_s \leq n - 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq i \wedge i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s$$

$$D + s - n < l_i \leq D + l_s + s - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < i - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_s, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$l_s - l = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_1)} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-k_1)!} \cdot \\
 & \frac{(n_{ik}-n_{is}-k_2)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_s-j_i-k_2)!} \cdot \\
 & \frac{(n_s-j_i-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{(\cdot)}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - \dots)!} \frac{(l_s - l - \dots)!}{(l_s - j_s - l + 1)! \dots (j_s - 2)!} \frac{(D - \dots)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l = i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} - j_s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=1}^{\binom{(\cdot)}{j_s=1}} \sum_{i=1}^{\binom{(\cdot)}{j_s=1}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_i - i + 1)} \sum_{(j_i=s)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_s=n-j_i+1}^{n_{ik}+j_{ik}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - 1)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(l_i + j_{sa}^{ik} - j_i - l_{ik})! \cdot (j_i - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!} \cdot \sum_{j_{ik}=j_{sa}^{ik}}^{(n)} \sum_{(j_s=1)}^{(n)} \sum_{(j_i=s)}^{(n)} \sum_{n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1}^{n_i} \sum_{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}^{n_{ik}} \frac{(n_i - n_{ik} + j_{ik} - \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{ik} + j_{ik} - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq l_i < n \wedge l = l_i \wedge l_i \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge n_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{ik} > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} - j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=i}^{\binom{D}{l}} \sum_{(j_s=1)}^{\binom{D-l}{s}}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{\binom{D-l}{s}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{\binom{n_i-j_{ik}-\mathbb{k}_1}{n_i-j_{ik}-\mathbb{k}_1+1}} \sum_{(n_s=n-j_i)}^{\binom{n_i-j_{ik}-\mathbb{k}_2}{n_i-j_{ik}-\mathbb{k}_2}}$$

$$\frac{(n_i - j_{ik} - \mathbb{k}_1 - 1)!}{(j_i - 2)! \cdot (n_i - n_{ik} - \mathbb{k}_1 + 1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s - j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=i}^{\binom{D}{l}} \sum_{(j_s=1)}^{\binom{D-l}{s}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{\binom{D}{s}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{\binom{D}{s}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{\binom{D}{s}}$$

$$\frac{(n_i + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

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$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l = l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^l - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^l\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$j_s, j_{ik}, j_i = \sum_{k=i}^{l_i} \sum_{j_s=1}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\quad)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{n_s=n-j_i+1}^{n_{ik}+j_{ik}-j_i-k_2}$$

$$\frac{(n_i - n_{ik} - k_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - k_1 + 1)!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=1}^{( )} \sum_{j_s=1}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{( )} \sum_{j_i=1}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{( )} \sum_{n_s=n_{ik}-j_i-\mathbb{k}_2}$$

$$\frac{(n_i + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - \mathbb{k}_2)!}{(n_i + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - \mathbb{k} - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(n - l_i)!}{(n - n - \mathbb{k} - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n - s)!}$$

$$(D \geq n < n \wedge l = i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l = i \wedge l_i \leq D + s - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n) \vee$$

$$(D \geq n < n \wedge l = i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_i - s + 1 > l_s \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{lk} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{lk} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{lk}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$



$s > 4 \wedge s = s + k \wedge$

$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=i}^{\binom{()}{s}} \sum_{l=\binom{()}{s=1}}^{\binom{()}{s}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j_i=j_{sa}^{ik}+s-j_{sa}^{ik})}^{\binom{()}{l-i^{l+1}}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)+j_{ik}} \sum_{n_s=n-j_i+k_2}^{(n_i-j_{ik}-k_1+1)+j_{ik}-k_2}$$

$$\frac{(n_i-j_{ik}-k_1+1)!}{(n_i-2)! \cdot (n_{ik}-n_{ik}+k_1+1)!}$$

$$\frac{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i-k_2)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(n_s-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(l_{ik}-j_{ik}-l_s+1)! \cdot (j_{ik}-j_{sa}^{ik})!}$$

$$\frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

$$\sum_{k=i}^{\binom{()}{s}} \sum_{l=\binom{()}{s=1}}^{\binom{()}{s}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{\binom{()}{s}} \sum_{(j_i=s)}^{\binom{()}{s}}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1+1)}^{\binom{()}{s}} \sum_{n_s=n_{ik}+j_{ik}-j_i-k_2}$$

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$$\frac{(n_i + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{zS}^{i, j_{ik}} = \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_{ik}+s-l-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=0}^{l-1} \sum_{j_s=j_{ik}+l_s-k}^{j_s+l-1} \sum_{j_{ik}=l_{ik}+s-k}^{j_{ik}+l-1} \sum_{j_i=l_{ik}+s-k}^{j_i+l-1} \sum_{j_{sa}^{ik}=2}^{j_{sa}^{ik}+2} \\
 & \sum_{n_i=n+k}^{n_i-n+k} \sum_{n_{is}=n+k-j_s+1}^{n_{is}=n+k-j_s+1} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{ik}=n+k_2-j_{ik}+1} \sum_{n_s=n-j_i+1}^{n_s=n-j_i+1} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

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$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \sum_{j_{ik}=j_i+j_{sa}^{lk}-s}^{(l_{ik}+s-l-j_{sa}^{lk}+1)} \sum_{(j_i=l_i+n-D)}^{(\cdot)} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{ik}}^{(\cdot)} \sum_{(n_{ik}+j_{ik}-j_i)}^{(\cdot)} \frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + \dots + j_i + l_{k1} - \dots - j_i - s - l_k - j_{sa}^s)!} \frac{1}{(n_{is} + n_{ik} + \dots + j_i + l_{k1} - \dots - j_i - s - l_k - j_{sa}^s)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_i + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{lk} \leq j_i < n \wedge$$

$$l_{ik} - j_{sa}^{lk} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = l_k > \wedge$$

$$j_{sa}^{lk} - j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{lk}, \dots, l_{k2}, j_{sa}^i\} \wedge$$

$$s > j_{sa}^s = s + l_k \wedge$$

$$l_{kz}: z = 2 \wedge l_k = l_{k1} + l_{k2} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j_i+j_{sa}^{ik}-s} \sum_{(j_i=l_i+n-D)}^{(l_s+s-l)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_1)} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)!(n_i-n_{ik}-j_{ik}-k_1)!} \cdot \\
 & \frac{(n_{ik}-k_2-1)!}{(j_i-j_{ik}-1)!(n_{ik}-j_{ik}-n_s-j_i-k_2)!} \cdot \\
 & \frac{(n_s-j_i-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_i+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_i + j_{sa}^{ik} - l_i - s)!}{(j_{ik} + l_i - l_i - s)! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{(\cdot)} \\
& \sum_{j_{ik} = j_i + j_{sa}^{ik} - s}^{(l_s + s - l)} \sum_{(j_i = l_i + n - D)}^{(l_s + s - l)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(\cdot)} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, l_i} = \sum_{k=l}^{( )} (j_s = j_{ik} + l_s - l_{ik})$$

$$\sum_{l_{ik}=l_i+n-D}^{n+j_{sa}^{ik}-1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(l+1)}$$

$$\sum_{n+l+k}^{(n-j_s+1)} \sum_{(n+l+k-j_s+1)}$$

$$\sum_{n+l+k_2-j_{ik}}^{n_{is}+j_{ik}-k_1} \sum_{(n_{is}+j_{ik}-k_2)}^{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - k_1 - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_{ik} - k_2 - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

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$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}} \sum_{(n_s=n_{ik}+l_{k2}-j_i-l_{k2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k1} - n_s - j_i - l_{k2} - 2) \cdot (n_{is} - n - l_{k2} - j_{sa}^s)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k1} - n_s - j_i - l_{k2} - 1) \cdot (n_{is} - n - l_{k2} - j_{sa}^s)!} \cdot \frac{1}{(n_{is} - j_s - s)!} \cdot \frac{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}{(l_s - j_s - l)!} \cdot \frac{(n - l_i)!}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s - j_{sa}^{ik} - 1 \leq j_{ik} - j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + l_{k2} = l_s \wedge l_{k2} + j_{sa}^{ik} - s > l_{ik}$

$D \geq n < n \wedge l_{k1} + l_{k2} > 0 \wedge$

$j_{sa}^{ik} < j_i - 1 \wedge j_{sa}^s < j_{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, l_{k1}, j_{sa}^i\} \wedge$

$s > j_{sa}^s = s + l_{k1} \wedge$

$l_{kz}: z = 2 \wedge l_{kz} = l_{k1} + l_{k2} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-s-1}^{l_i-n+1} \sum_{(j_i=l_i+n-D)}$$

$$\frac{\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

$$\frac{\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

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$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - n_s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - n_s)!}$$

$$\frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{l=1}^{\lfloor \frac{n_{is} - n_{ik} - l}{2} \rfloor} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{n + j_{sa}^{ik} - D - s}^{\lfloor \frac{n_{is} - n_{ik} - l}{2} \rfloor} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})} \binom{(\quad)}{(\quad)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \binom{(\quad)}{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

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$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s}^{(l_i+n-D-s)} \sum_{k=0}^{j_{sa}^{ik}-1} \sum_{l=0}^{(l_i-l+1)} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(j_i=l_i+n-D)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}$$

$$\sum_{n+l_k}^{(n_i+l+1)} \sum_{(n_{is}=n+l_k+1)}$$

$$\sum_{n_{ik}+l_{k_2}-j_{ik}}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \sum_{(j_i+1)}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{( )} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{i_s} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{i_s} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (j_{sa}^s - s)! \cdot (l_s - l - 1)! \cdot (l_s - j_s - \dots + 1)! \cdot (j_s - \dots)! \cdot (D - \dots)! \cdot (D - j_i - n - n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_s, \dots, \mathbb{k}_2, j_s\} \wedge$$

$$s > 1 \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{i_s}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - k_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l + 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + l_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}
 \end{aligned}$$

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$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=0}^{(l_s-l+1)} \sum_{l_i=D-s+1}^{(l_s-l+1)}$$

$$\sum_{j_s+l_{ik}-s}^{(n)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(n)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(n)}$$

$$\frac{(n + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$



$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{ik}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{j_s+l-1} \sum_{j_i=l_i+l-1}^{j_i+l-1} \sum_{j_{ik}=j_i+n-D}^{j_{ik}+n-D} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{j_s-j_{ik}-\mathbb{k}_1} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \sum_{j_{ik}=j_i+j_{sa}^{lk}-s}^{(l_{ik}+s-l-j_{sa}^{lk})} \sum_{(j_{ik}+n-D)}^{(n_i+1)} \sum_{(n+l)}^{(n_i+n+1)} \sum_{(n_{ik}=n_{is}+j_{ik}-k_1)}^{( )} \sum_{(j_{ik}-k_2)}^{( )} \frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s = D - n - 1 \wedge$$

$$D + j_i + s - n - l_i - 1 \leq l \leq n - n + 1 \wedge$$

$$1 \leq j_s \leq j_i - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j_i \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$n \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-1}^{n_{is}+j_s-j_{ik}} \sum_{(n_s=n-j_i+k_2)}^{(n_i+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} + j_s - 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{ik} - k_2 - 1)!}{(j_i - j_s - 1)! \cdot (n_{is} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+n-D)}^{(\quad)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - 1)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! (j_s - 2)!} \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_s - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - 1 = l \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=l_i+n-D)}^{(n-j_s+1)} \sum_{n_i=n+\mathbb{k}}^{(n_{is}=n+\mathbb{k}-j_s+1)}$$

$$\frac{\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} (n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^k+2)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_i=j_{ik}+s-j_{sa}^k)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = j_i + l_{ik} - l_i} \sum_{(j_i = l_i + n - D)}^{(l_s + s - l)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\begin{aligned}
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_i-1)} \sum_{(j_s=l_s+n-k)}^{(l_i-1)} \sum_{(j_i+l_{ik}-l_i)}^{(l_i-1)} \sum_{(j_i+l_{ik}-l_i)}^{(l_i-1)} \\
 & \sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_i-j_{ik}-k_1} \sum_{(n_{s}=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot
 \end{aligned}$$

GÜLDÜNYA

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_i+n)}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-1}^{( )} \sum_{(j_s=n_{ik}+j_{ik}-j_i)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - \dots - 2 \cdot l_k)!}{(n_{is} + n_{ik} + \dots + j_i + l_{k1} + \dots - j_i - \dots - l_k - j_{sa}^s)!}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - \dots - 2 \cdot l_k)!}{(n_{is} + n_{ik} + \dots + j_i + l_{k1} + \dots - j_i - \dots - l_k - j_{sa}^s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s \wedge D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_i \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i - j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = l_k > n \wedge$$

$$j_{sa}^{ik} - j_s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l\} \cup \{j_{sa}^{ik}, \dots, l_{k2}, j_{sa}^i\} \wedge$$

$$j_{sa}^{ik} - j_s = s + l_k \wedge$$

$$l_{k2}: z = 2 \wedge l_k = l_{k1} + l_{k2} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=l_s+n-D)}^{( )}$$



$$\begin{aligned}
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_i-n_{ik}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-l_{k_2}-1)!}{(j_i-j_{ik}-1)!(n_{ik}-j_{ik}-n_s-j_i-l_{k_2})!} \cdot \\
 & \frac{(n_s-j_i-n-1)! \cdot (n-j_i)!}{(n_s-j_i-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{( )} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-l-s+1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}
 \end{aligned}$$

GÜLDÜZÜMÜ

$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l - 1)!}{(l_s - j_s - l + 1)! \cdot (l - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - l)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{k=l}^{(\cdot)} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}^{(\cdot)} \\
& \sum_{j_{ik} = l_i + n + j_{sa}^{ik} - D - s}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + l_i - l_{ik})}^{(\cdot)} \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(\cdot)} \\
& \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz = \sum_{k=l}^{j_{ik}+n-D-s} \sum_{(j_s=l_s+n-D)}^{j_{ik}, j_i}$$

$$j_{ik} = l_i + \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{j_{sa}^{ik}-l-s+1} j_{sa}^{ik-D-s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j_{ik}+j_{sa}^{ik}-l_{ik})}$$

$$\sum_{(n_i-j_s+1)} \sum_{(n_{ik}+j_{ik}-j_s+1)} \sum_{(n_{ik}-j_{ik}-l_{k_1})} \sum_{(n_{ik}+j_{ik}-n_s-j_i-l_{k_2})} \sum_{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - n_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)}$$

GÜLDÜZYA

$$\sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+l_i)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+l_i-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - l_i - 2 \cdot l_i)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_i + j_{sa}^s)!} \cdot \frac{1}{(n_{is} + j_s - j_s - s)!} \cdot \frac{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}{(l_s - j_s - l_i)!} \cdot \frac{1}{(D - j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l_s > D - n + 1$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_{sa}^{ik} - 1 \leq j_{ik} - j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - j_{sa}^{lk} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{lk} + l_i > l_s \wedge l_{ik} + j_{sa}^{ik} - s = l_{ik}$

$D \geq n < n \wedge l_s > 0 \wedge$

$j_{sa}^{ik} < j_i - 1 \wedge j_{sa}^s < j_{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, \dots, l_{k_1}, j_{sa}^i\} \wedge$

$s > l_s = s + l_k \wedge$

$l_{k_z}: z = 2 \wedge l_{k_2} = l_{k_1} + l_{k_2} \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{lk}+1)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{lk})}^{(l_s+s-l)}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(j_{ik} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}^{(l_s-l+1)} \\
 & \sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=l_s+s-l+1)}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}
 \end{aligned}$$

GÜLDÜZYAZ

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - j_s - 1)! \cdot (j_{ik} - j_s - l_s + 1)!}$$

$$\frac{(D - l_i)!}{(n - l_i - 1)! \cdot (n - j_i)!}$$

$$\sum_{s=1}^l \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_s=j_{ik}-j_{sa}^{ik}+1}$$

$$\sum_{j_i=l_{ik}+n+s-D-j_{sa}^{ik}}^{l_s+s-l}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

GÜLDÜMÜN

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned} & \sum_{j_s=2}^{j_{ik}-j_{sa}^{ik}+1} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{j_i+j_{sa}^{ik}-s} \sum_{j_i=j_{ik}+l_{ik}}^{n-D} \sum_{l_{ik}=j_{ik}+l_i-l_{ik}}^{n-D} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \\ & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\ & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \cdot \\ & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\ & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \end{aligned}$$



$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = l_s + j_{sa}^{ik} - l + 1}^{l_{ik} - l + 1} \sum_{(j_i = j_{ik} + l_i - l_{ik})}^{( )}$$

$$\sum_{k=1}^n \sum_{(n_{is} = n - k + 1)}$$

$$\sum_{(n_{ik} + j_{ik} - j_i - l_{ik})}^{n_{is} + j_s - j_{ik} - l_{ik}} \sum_{(n_{is} = j_i + 1)}$$

$$\frac{(n_{is} - l_{ik} - k_1 - 1)!}{(j_{ik} - l_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{is} - l_{ik} - k_2 - 1)!}{(j_{ik} - l_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{( )} \sum_{(j_s = j_{ik} - j_{sa}^{ik} + 1)}$$

$$\sum_{j_{ik} = l_{ik} + n - D}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i = j_{ik} + l_i - l_{ik})}^{( )}$$

GÜLDENMYA

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_s, \dots, \mathbb{k}_2, j_s\} \wedge$$

$$s > 1 \wedge s = s + \mathbb{k} \wedge$$

$$z: z = z + \mathbb{k} = \mathbb{k}_1 + \mathbb{k} \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\quad)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - k_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + 1 - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{( )} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}
 \end{aligned}$$

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$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=l}^{(l_s-l+1)} \sum_{j_s=j_s+j_{sa}^{ik}-1}^{(j_s+l_{ik}-j_{sa}^{ik}+1)} \sum_{n_i=n+l_k}^n \sum_{n_s=n+l_k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}^{( )} \frac{(n_{ik} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

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$$fz S_{j_s, j_{ik}} = \sum_{l=1}^{(1)} \sum_{(j_s=l_s+n-D)}^{(l_i-l+1)} \sum_{(j_{ik}=l_{ik}-l_i)}^{(j_i=l_i+n-D)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(j_s-j_{ik}-\mathbb{k}_1)} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-)} \sum_{(l_i+n-D)}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n-)}^{(n_{is}+1)}$$

$$\sum_{(n_{ik}=n_{is}-)}^{(\ )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} - n_s - i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i = D - n - 1 \wedge$$

$$D + j_s + s - n - l_i - 1 \leq l \leq n - n + 1 \wedge$$

$$\leq j_s \leq j_s - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j_s \wedge$$

$$l_{ik} - j_{sa}^{ik} > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_i+j_{sa}^{lk}-l-s+1} \sum_{(j_i=j_{ik}+l_i-l)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-1}^{n_{is}+j_s-j_{ik}} \sum_{(n_s=n-j_i+k_2)}^{n_{is}+j_{ik}-j_i-k_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{ik} - k_2 - 1)!}{(j_i - j_s - 1)! \cdot (n_{is} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{lk} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{lk} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{lk}+1)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_s+j_{sa}^{lk}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-k_2}} \frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - 1)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! (j_s - 2)!} \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_s - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - 1 > l_s \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_s^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s - k \wedge$$

$$k_{z_1} = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_{z} S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_s+n-D)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}^{(l_{ik}+s-l-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$



$$\frac{\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}}{(n_i - n_{is} - 1)!} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - l_{k_2})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + 1 - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_{ik}+n+s-D-j_{sa}^{ik})}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_{k_1})!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_{k_1} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D + l_s + s - n - l_i + 1 \leq l \leq D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z=2}^{s, j_{ik}, j_i} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_s + n - D)}$$

$$\sum_{j_{ik} = l_{ik} + n - D}^{l_{ik} - l + 1} \sum_{(j_i = j_{ik} + l_i - l_{ik})}^{()}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\begin{aligned}
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
& \sum_{l=1}^{j_s - j_{ik} - j_{sa}^{ik}} \sum_{j_i = j_{ik} + l_i - l_{ik}}^{j_{ik} - j_s - j_{sa}^{ik} - l} \binom{j_{ik} - j_s - j_{sa}^{ik} - l}{j_{ik} - j_s - j_{sa}^{ik} - l} \cdot \\
& \sum_{n_i = n + \mathbb{k}}^{n_i - j_s + 1} \sum_{n_{is} = n + \mathbb{k} - j_s + 1}^{(n_i - j_s + 1)} \cdot \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1}^{(n_{is} + j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \cdot \\
& \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
& \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
\end{aligned}$$

$$n_s \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{l=1}^{( )} \sum_{(j_s=j_{ik}-l_{ik})}^{( )} \sum_{(l_{ik}+s)}^{( )} \sum_{(j_i=j_{sa}+1)}^{( )} \sum_{(j_i=s+1)}^{( )} \sum_{(n)}^{( )} \sum_{(n_{is}=\mathbb{k}+n_{is}=\mathbb{k}-j_s+1)}^{( )} \sum_{(n_{ik}=\mathbb{k}_2-j_{ik}+1)}^{( )} \sum_{(n_s=n-j_i+1)}^{( )} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\begin{aligned}
 & \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=l_{ik}+s-l-j_{sa}^{ik}+s)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{is}+j_s-j_{ik}}^{(n_i+j_{ik}-l_i-k_2)} \\
 & \sum_{n_{ik}=n+k_2-1}^{(n_s-n-j_i)} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}+j_s-j_{ik}-1)!} \\
 & \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-k_1)!} \\
 & \frac{(n_{ik}-n_{ik}-k_2-1)!}{(j_i-j_s-1)! \cdot (n_{is}+j_{ik}-n_s-j_i-k_2)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \sum_{(j_i=s+1)}^{( )} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{\binom{()}{n_s=n_{ik}+j_{ik}-j_i-k_2}} \frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - 1)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} - j_s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s - k \wedge$$

$$k_z \geq 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{\binom{()}{j_s=j_{ik}+l_s-l_{ik}}} \frac{j_i + j_{sa}^{ik} - s}{j_{ik} = j_{sa}^{ik} + 1} \frac{(l_s + s - l)}{(j_i = s + 1)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - k_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + 1 - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}
 \end{aligned}$$

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$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_{ik}=j_i+l_s-l_{ik}}^{(j_i+l_s-l_{ik})} \sum_{(j_i+l_s-l_{ik})}^{(l_s+s-l)}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(j_i+j_{sa}^{ik}-s)} \sum_{(j_i+j_{sa}^{ik}-s)}^{(j_i+s+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_{ik} + n_{is} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$



$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{n-l+1} \sum_{j_i=j_{ik}+s-j_{sa}^{ik}}^{n-l+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\ )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(\ )}$$

$$\sum_{i=n+k}^n \binom{n_i}{n_i-k+1}$$

$$\sum_{(n_{ik}=n_{is}+j_{ik}-k_1-j_i-k_2)}^{(\ )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} - k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^s - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 = j_{ik} + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + j_i - n \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j_{s_a}^{ik}+1}^{l_s+j_{s_a}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{i_s}^{ik})}^{(l_i-l+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{i_2}^{ik}+1}^{n_{i_s}+j_s-j_{i_2}^{ik}} \sum_{(n_s=n-j_i+l_{k_1})}^{(n_i+j_{i_2}^{ik}-l_{k_2})}$$

$$\frac{(n_i - n_{i_2} - 1)!}{(j_s - 2)! \cdot (n_{i_s} - j_s + 1)!}$$

$$\frac{(n_{i_s} - n_{i_2} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - n_{i_2} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{i_2} - l_{k_2} - 1)!}{(j_i - j_{i_2} - 1)! \cdot (n_{i_2} + j_{i_2} - n_s - j_i - l_{k_2})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{s_a}^{ik} - l_{i_2} - s)!}{(j_{ik} + l_i - j_i - l_{i_2})! \cdot (j_i + j_{s_a}^{ik} - j_{i_2} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\quad)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=j_{s_a}^{ik}+1}^{l_s+j_{s_a}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{i_s}^{ik})}^{(\quad)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{(\cdot)}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - \dots)!} \frac{(l_s - l - \dots)!}{(l_s - j_s - l + 1)! \dots (j_s - 2)!} \frac{(D - \dots)!}{(D + j_{sa}^s - \mathbf{n} - l_i)! \cdot (n - j_i)!}$$

$$D \geq \mathbf{n} < n \wedge l \neq i \wedge l_s \leq D - \mathbf{n} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} - j_s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq \mathbf{n} \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - \mathbf{n} \wedge$$

$$D \geq \mathbf{n} < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} (n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + 1 - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-k_2)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned} f_z^S j_s, j_{ik}, j_i &= \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)} \\ &\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})} \\ &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\ &\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\ &\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\ &\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \end{aligned}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{j_s - l + 1} (j_s - k - l + 1)$$

$$\sum_{j_{ik} = j_{ik} - l_s + j_{sa}^{ik}}^{j_{ik} + l_{ik} - l_s} \binom{(\cdot)}{(\cdot)}$$

$$\sum_{n_i = n + k} \sum_{n_{is} = n + k - j_s + 1}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - k_2)} \binom{(\cdot)}{(\cdot)}$$

$$\frac{(n_s + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n < n \wedge l \neq l_i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{l=1}^{( )} \sum_{j_s=j_{sa}-l}^{( )} \sum_{j_{ik}=j_{sa}-l_{ik}}^{( )} \sum_{j_i=j_{sa}-l_{ik}-s}^{( )} \sum_{l_{ik}=j_{sa}+1}^{( )} \sum_{i=l_i+n-D}^{( )} \sum_{n_i=l_i+1}^{( )} \sum_{n_i+l_{ik}}^{( )} \sum_{n_{is}=n+l_{ik}-j_s+1}^{( )} \sum_{n_{ik}=n_{is}-j_{ik}-\mathbb{k}_1}^{( )} \sum_{n_{ik}=n_{is}-\mathbb{k}_2-j_{ik}+1}^{( )} \sum_{n_s=n-j_i+1}^{( )} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(n_{is} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

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$$\begin{aligned}
 & \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=l_{ik}+s-l-j_{sa}^{ik}+s)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-1}^{n_{is}+j_s-j_{ik}} \sum_{(n_s=n-j_i)}^{(n_i+j_{ik}-i-k_2)} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \\
 & \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \\
 & \frac{(n_{ik}-n_{ik}-k_2-1)!}{(j_i-j_{ik}-1)! \cdot (n_{is}+j_{ik}-n_s-j_i-k_2)!} \\
 & \frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 & \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \sum_{(j_i=l_i+n-D)}^{( )} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{(\cdot)}{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - \dots)!} \frac{(l_s - l - \dots)!}{(l_s - j_s - l + 1)! \dots (j_s - 2)!} \frac{(D - \dots)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} - j_s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{ik} + s - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{\binom{(\cdot)}{j_s=j_{ik}+l_s-l_{ik}}} \sum_{j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{j_{ik}=j_{sa}^{ik}+1}^{(n_i-j_s+1)} \sum_{(j_i=l_i+n-D)}^{(n_{is}=n+\mathbb{k}-j_s+1)}$$

$$\begin{aligned}
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - k_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa} - l_{ik} - s)!}{(j_{ik} + l_i - j_{sa} - l_{ik})! \cdot (l_i + j_{sa} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + 1 - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_s+s-l+1)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}
 \end{aligned}$$

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$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_i=l_i+n-D}^{n} \sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+l_i)} \sum_{j_s=l_i+l_{ik}}^{(l_s+s-l)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_s=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_s+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )}$$

$$\frac{(n_s + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_s + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

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$$fz S_{j_s, j_{ik}, j_i} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{n+l_s-j_s-1} \sum_{j_i=l_i-l+1}^{n+l_i-j_i-1} \sum_{j_{ik}=j_{ik}+1}^{n+l_{ik}-j_{ik}-1} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{n_i-j_s+1} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{ik}+j_{ik}-j_i-\mathbb{k}_2} \sum_{n_s=n-j_i+1}^{n_s-j_i+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n_{is}+1)}$$

$$\sum_{n_{ik}+k_2-j_{ik}}^{n_{is}+j_s-j_{ik}} \sum_{(n_{ik}+j_{ik}-j_i-k_1)}$$

$$\frac{(n_{is}-1)! \cdot (n_{is}-j_s+1)!}{(j_{ik}-1)! \cdot (n_{ik}+j_s-n_{ik}-j_{ik}-k_1)!}$$

$$\frac{(n_{is}-1-k_1-1)!}{(j_{ik}-1)! \cdot (n_{ik}+j_s-n_{ik}-j_{ik}-k_1)!}$$

$$\frac{(n_{ik}-n_s-k_2-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i-k_2)!}$$

$$\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!}$$

$$\frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_{ik}+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )}$$

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$$\sum_{n_i=n+l_k}^n \sum_{(n_i=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_1})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$

$D + s - n < l_i \leq D + l_{ik} + s - j_{sa}^{ik} \wedge$

$D \geq n < n \wedge I = l_{k_1} = 0 \wedge$

$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$

$s: \{j_s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge s \leq s + l_k \wedge$

$l_{k_2}: z \geq 2 \wedge l_k = l_{k_2} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_i+n+j_{sa}^{ik}-D-s-1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\frac{\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{ik} - l_{ik} - s)!}{(j_{ik} + l_{ik} - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)}$$

$$\frac{\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

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$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - n_s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - n_s)!} \cdot \\
 & \frac{(D - l_i)!}{(n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{l=1}^{\lfloor \frac{l_s + j_{sa}^{ik} - l}{n + j_{sa}^{ik} - D - s} \rfloor} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \binom{(\cdot)}{\cdot} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)}^{(\cdot)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z = \sum_{k=l}^{l_i+n-D-s} \sum_{j_s=2}^{l_i+n-D-s} j_{ik} j_i$$

$$\sum_{k=j_s+l_{ik}-l_s}^{l_i-l+1} \sum_{j_i=l_i+n-D}^{l_i-l+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} +$$

$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}$$

$$\sum_{j_{ik}=l_i+l_{ik}-l_s}^{(l+1)} \sum_{(j_{sa}^{ik})}$$

$$\sum_{(n_i-j_s+1)} \sum_{(n_{ik}+l_{ik}-j_s+1)}$$

$$\sum_{n_{is}+j_{ik}-l_{k_1}}^{(n_{ik}-j_i-l_{k_2})} \sum_{(n_s=n-j_i+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} -$$

$$\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}$$

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$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})} \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - 2) \cdot (n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2) \cdot (j_{sa}^s)!}{(n_{is} + n_{ik} + j_s - j_s - s)! \cdot (l_s - j_s - l + 1)! \cdot (j_s - 2)! \cdot (j_i - l_i)! \cdot (D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq n + 1$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i < n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{ik} + j_{sa}^{ik} - s > l_{ik}$$

$$D + s - n < l_i \leq D + l_{ik} - n - j_{sa}^{ik} \wedge$$

$$D \geq n < n \wedge l = k > n \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^{ik}, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = l + k \wedge$$

$$l \wedge k = l_{k_1} + l_{k_2} \Rightarrow$$

$$fz S_{j_s j_{ik} j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_1})} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-l_{k_1})!} \cdot \\
 & \frac{(n_{ik}-l_{k_2}-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}-j_{ik}-n_s-j_i-l_{k_2})!} \cdot \\
 & \frac{(n_s-j_i-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!} \cdot \\
 & \frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_i+j_{sa}^{ik}-l_{ik}-s)!}{(j_i+l_i-j_i-l_{ik})! \cdot (j_i+j_{sa}^{ik}-j_{ik}-s)!} \cdot \\
 & \frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_i+n-D-s+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{(l_i-l+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_i - l + 1)! \cdot (j_i - l - 2)!} \cdot \\
 & \frac{(l_i + j_{sa}^{ik} - l_i - s)!}{(j_{ik} + l_i - l - s)! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)} \\
 & \sum_{j_{ik} = j_s + l_{ik} - l_s} \sum_{(j_i = j_{ik} + s - j_{sa}^{ik})} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

GÜLDÜZMAYA

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z \mathcal{S}_{j_s, j_i} = \sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-l+1} \sum_{(j_i=l_i+n-D)}^{(l_i-l+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{j_s=j_{ik}+l_s-l_{ik}}$$

$$(l_{ik}+1)$$

$$\sum_{j_i=j_{sa}^{lk}-s} \sum_{j_i=l_i+n-D}$$

$$(j_i+1)$$

$$n_{is}+k (n_{is}=n+k-j_s+1)$$

$$\sum_{k=l_1}^{( )} \sum_{n_s=n_{ik}+j_{ik}-j_i-k_2}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + k + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > l_i \wedge n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s > n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 - j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_i + j_{sa}^{ik} - s > l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{ik} + s - n - j_{sa}^{ik} \wedge$$



$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_i} = \sum_{l=1}^{( )} \sum_{(j_s=j_{ik}+l, n_s=l_{ik})}^{( )} \sum_{(l_s+j_{sa}^i-l)}^{( )} \sum_{(j_{ik}=j_{sa}^i, (j_i=l_i+n-D))}^{( )} \sum_{(n_i=n_s+l, (n_i=n_s+l, i_s+1))}^{( )} \sum_{(n_{ik}=n_s+l, (n_{ik}=n_s+l, i_s+1))}^{( )} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

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$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{( )}$$

$$\sum_{j_{ik}=j_i+j_{sa}^{ik}-s}^{(l_s+s-l)} \sum_{(j_i=l_i+n-p)}^{( )}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-1}^{( )} \sum_{(n_{is}=n_{ik}+j_{ik}-j_i)}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + \dots + j_{ik} + l_{k1} - \dots - j_i - s - l_k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l = l \wedge l_s \leq D - n - 1 \wedge$$

$$D + l_s + s - n - l_i + \dots \leq l \leq l - 1$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} - 1 \wedge j_s + \dots \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + \dots \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + \dots \leq l_s \wedge l_i + \dots - s > l_{ik} \wedge$$

$$D + \dots < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^s - \dots - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k1}, j_{sa}^{ik}, \dots, l_{k2}, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned}
 f_z^S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=2)}^{(l_{ik}-l-j_{sa}^{ik}+2)} \\
 &\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_i-l+1)} \sum_{(j_i=l_i+n-1)}^{(l_i-l+1)} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n+k_2-1}^{n_{is}+j_s-j_{ik}} \sum_{(n_s=n-j_i+1)}^{(n_i+j_{ik}-j_i-k_2)} \\
 &\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \\
 &\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 &\frac{(n_{ik} - n_{ik} - k_2 - 1)!}{(j_i - j_s - 1)! \cdot (n_{is} + j_{ik} - n_s - j_i - k_2)!} \cdot \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 &\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 &\frac{(l_i + j_{sa}^{ik} - l_{ik} - s)!}{(j_{ik} + l_i - j_i - l_{ik})! \cdot (j_i + j_{sa}^{ik} - j_{ik} - s)!} \cdot \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 &\sum_{k=l}^{(l_{ik}-l-j_{sa}^{ik}+2)} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-l-j_{sa}^{ik}+2)} \\
 &\sum_{j_{ik}=j_s+l_{ik}-l_s}^{( )} \sum_{(j_i=j_{ik}+s-j_{sa}^{ik})}^{( )} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - 1)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{ik} - j_s$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s \geq 4 \wedge s = s - \mathbb{k} \wedge$$

$$\mathbb{k}_z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)} \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=s+1)}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^{(n_{is}=n+\mathbb{k}-j_s+1)}$$

$$\begin{aligned}
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - k_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + 1 - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)} \\
 & \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_i-l+1)} \sum_{(j_i=l_s+s-l+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}
 \end{aligned}$$

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$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{j_{sa}^{ik}+1}^{(l_s+s-l)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{( )}$$

$$\frac{(n_s + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_s + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

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$$fz S_{j_s, j_{ik}} = \sum_{l=1}^{\mathbb{k}+1} \sum_{(j_s=2)}^{\mathbb{k}+1} \sum_{j_{ik}=\mathbb{k}+1}^{(j_i=j_{ik}+l-l_{ik})} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\begin{aligned}
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 & \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)} \\
 & \sum_{j_{ik}=l_s + j_{sa}^{ik} - l + 1}^{l_{ik} - l + 1} \sum_{(j_i=j_{ik} + l_i - l_{ik})}^{( )} \\
 & \sum_{i=n+l_k}^n \sum_{(n_{is}=n_{is} + 1)}^{(n_{is} + 1)} \\
 & \sum_{n_{is} + j_s - j_{ik} - l}^{(n_{ik} + j_{ik} - j_i - l)} \\
 & \sum_{n_{ik} + k_2 - j_{ik}}^{(n_{is} - j_i + 1)} \\
 & \frac{(n_{is} - j_s - k_1 - 1)!}{(j_{ik} - l - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{is} - j_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!} \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} - \\
 & \sum_{k=l}^{( )} \sum_{(j_s=j_{ik} - j_{sa}^{ik} + 1)}^{( )} \\
 & \sum_{j_{ik}=j_{sa}^{ik} + 1}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i=j_{ik} + l_i - l_{ik})}^{( )}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_1)}^{(\quad)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{(j_{sa}^s - s)!}{(l_s - l - 1)!}$$

$$\frac{(l_s - j_s - 1)! \cdot (j_s - 1)!}{(D - j_i - n - j_i)!}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} < j_i + j_{sa}^{ik} - s$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$

$D \geq n < n \wedge I = \mathbb{k} = 0 \wedge$

$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa}^{ik} - 1 \wedge$

$s: \{j_s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge s \leq s + \mathbb{k} \wedge$

$\mathbb{k}_2: z = 2 \wedge \mathbb{k} = \dots \mathbb{k}_2 \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l} \sum_{(j_s=2)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\quad)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!}$$

$$\frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(n_{is} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_i=j_{ik}+l_i-l_{k_2})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)} \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_i+n-D)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(l_i - l + 1)!}{(D + j_i - n - l_i)! \cdot (j_i - l_i)!} + \\
& \sum_{k=0}^{l_i - l + 1} \sum_{j_s=2}^{l_i - l + 1 - k} \sum_{j_i=l_i - k}^{l_i - l + 1 - k} \sum_{j_i=l_i - k}^{l_i - l + 1 - k} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
& \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
& \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-)} \sum_{(l_i+n-D)}$$

$$\sum_{(n_{is}=n+l_{ik}+1)}^{(n_{is}=n+1)}$$

$$\sum_{(n_{ik}=n_{is}+j_{ik}-l_{k_1}-l_{k_2})}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} - l_{k_1} - n_s - l_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq l \wedge l_s \leq D - n - l_i \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - l_i < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D > n < n \wedge l = l_k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, \dots, l_{k_2}, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + l_k \wedge$$

$$l_{k_2}: z = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

$$\begin{aligned}
 f_{zS}^{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)} \\
 &\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l)}^{( )} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 &\sum_{n_{ik}=n+k_2-j_{sa}^{ik}-1}^{n_{is}+j_s-j_{ik}-l_{k_1}+j_{ik}-l_{k_2}} \sum_{(n_s=n-j_i+l)}^{(n_i-j_s+1)} \\
 &\frac{(n_s-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}+j_s-1)!} \\
 &\frac{(n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-l_{k_1})!} \\
 &\frac{(n_{ik}-l_{k_2}-1)!}{(j_i-j_{ik}-1)! \cdot (n_{is}+j_{ik}-n_s-j_i-l_{k_2})!} \\
 &\frac{(n_s-1)!}{(n_s+j_i-n-1)! \cdot (n-j_i)!} \\
 &\frac{(l_s-l-1)!}{(l_s-j_s-l+1)! \cdot (j_s-2)!} \\
 &\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 &\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!} + \\
 &\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)} \\
 &\sum_{j_{ik}=l_s+j_{sa}^{ik}-l-s+1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )} \\
 &\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\frac{\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})}}{(n_i - n_{is} - 1)!} \cdot \frac{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot$$

$$\frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - l_{k_2})!} \cdot$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot$$

$$\frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(D - l_i)!}{(D + 1 - n - l_i)! \cdot (n - j_i)!} \cdot$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{lk}-D-s}^{l_s+j_{sa}^{lk}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{( )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_{k_1})!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_{k_1} - j_{sa}^s)!} \cdot$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot$$

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$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_i+n-D-s)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-l-s+1}^{l_i+j_{sa}^{ik}-l-s+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$



$$\begin{aligned}
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_s - l)!}{(D + j_i - n - l_i)! \cdot (j_i - l_i)!} + \\
 & \sum_{k=0}^{(l_s - l + 1)} \sum_{l_i = D - s + 1}^{(l_s - l + 1)} \\
 & \sum_{j_i = j_s + j_{sa}^{ik} - 1}^{l_i + j_s - l - s + 1} \sum_{(j_i = j_{ik} + l_i - l_{ik})}^{( )} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s = n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s = l_i + n - D - s + 1)}$$

$$\sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{(n_{ik} + l_i - l_{ik})}$$

$$\sum_{k=1}^n \sum_{(n_{is} = n_{ik} + 1)}$$

( )

$$\frac{(n_{is} + n_{ik} + j_{ik}^{k_1} - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq l \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^s - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > j_{sa}^{ik} + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned}
 f_{z^S} S_{j_s, j_{ik}, j_i} &= \sum_{k=l}^{(j_{ik}-j_{sa}^{ik}+1)} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)} \\
 &\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_{ik}+n+s-D-j_{ik})}^{(l_s+s-l)} \\
 &\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 &\sum_{n_{is}+j_s-j_{ik}}^{(n_{is}+j_s-j_{ik}-l_{k_1})} \sum_{(n_{is}+j_s-j_{ik}-l_{k_2})}^{(n_{is}+j_s-j_{ik}-l_{k_2})} \\
 &\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{(n_{ik}-j_{ik}+1)} \sum_{(n_s=n-j_i+1)}^{(n_s=n-j_i+1)} \\
 &\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 &\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \\
 &\frac{(n_{ik} - n_{ik} - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{is} + j_{ik} - n_s - j_i - l_{k_2})!} \\
 &\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \\
 &\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \\
 &\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 &\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \\
 &\sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)} \\
 &\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \sum_{(j_i=l_s+s-l+1)}^{(l_{ik}+s-l-j_{sa}^{ik}+1)} \\
 &\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\frac{\sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=\mathbf{n}-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} (n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - \mathbb{k}_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - \mathbf{n} - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - 1)!}{(j_s - l_s + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + \mathbf{n} - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\ )}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_{ik}+\mathbf{n}+s-D-j_{sa}^{ik})}$$

$$\sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}^{(\ )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - \mathbf{n} - 2 \cdot \mathbb{k} - j_{sa}^s)!}$$

$$\frac{1}{(\mathbf{n} + j_{sa}^s - j_s - s)!}$$

GÜLDÜMÜŞKA

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s + j_{sa}^{ik} - l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - l)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(l_i - l)!}{(D + j_i - n - l_i)! \cdot (j_i - l)!} + \\
 & \sum_{l_i=0}^{l_i=l-1} \sum_{j_{ik}=j_{ik}+j_{sa}^{ik}-l+1}^{l_i+1} \sum_{j_s=2}^{l_i-l+1} \sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_s=n-j_i+1}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
 \end{aligned}$$

GÜLDÜMÜYA

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\ )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=l_i+l_{ik})}^{(\ )}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n_{is}+1)}$$

$$\sum_{(j_i=l_i+l_{ik})}^{(\ )}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} - l_{ik} - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!}$$

$$\frac{1}{(n + j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D \geq n < n \wedge l_i \leq l \wedge l_s \leq D - n - 2 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^s - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s - l + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n - l_i \leq D + l_s + s - n - 1 \wedge$$

$$s > n - 1 \wedge I = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_{ik}+n-D-j_{sa}^{ik})} \sum_{(j_s=2)}^{(l_{ik}-l+1)} \sum_{j_{ik}=l_{ik}+n-D}^{(j_i=j_{ik}+l_i-l_{ik})} \sum_{n_i=n_{is}+j_s-1}^n \sum_{j_{ik}=j_{ik}+1}^{(n_{ik}+j_{ik}-\mathbb{k}_1)} \sum_{j_{ik}=j_{ik}+1}^{(n_{ik}+j_{ik}-\mathbb{k}_2)} \frac{(n_i - n_{is})!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{is} - \mathbb{k}_2 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} + \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-l+1)} \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(j_i=j_{ik}+l_i-l_{ik})} \sum_{(j_s=2)}^{(l_{ik}-l+1)}$$

GÜLDÜZMAYA



$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_s - l_{k_2} - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - l_{k_2})!} \cdot \\
 & \frac{(n_s - j_i - n - l - 1)!}{(n_s - j_i - n - l - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(n_{is} + l_{ik} - j_{sa}^{ik})! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \\
 & \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(n_i-j_s+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(\cdot)} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{(\cdot)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{(\cdot)} \sum_{(n_s=n_{ik}+j_{ik}-j_i-l_{k_2})}^{(\cdot)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + l_{k_1} - n_s - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + l_{k_1} - n_s - j_i - n - 2 \cdot l_k - j_{sa}^s)!} \cdot
 \end{aligned}$$

GÜLDÜMBA

$$\frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\}$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=l}^{(l_s - l + 1)} \sum_{(j_s=2)} \sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_i - l + 1)} \sum_{(j_i=l_i+n-D)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i - j_s + 1)} \sum_{n_{ik}=n+\mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_s=n - j_i + 1)}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \\
 & \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i - 1)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s - 1)! \cdot (j_{ik} - j_s - 1)!} \cdot \\
 & \frac{(D - l_i)!}{(n - l_i - 1)! \cdot (n - j_i)!} \cdot \\
 & \sum_{s=1}^l \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{j_s=j_{ik}-j_{sa}^{ik}+1} \sum_{j_{ik}=j_i+l_{ik}-l_i}^{l_s+s-l} \sum_{j_i=l_i+n-D}^{(l_s+s-l)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}^{(\quad)} \\
 & \frac{(n_{is} + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{is} + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)!} \cdot \\
 & \frac{1}{(n + j_{sa}^s - j_s - s)!} \cdot \\
 & \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$

$$D + l_s + s - n - l_i + 1 \leq l \leq l_i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_{zS} j_{sa}^{ik} = \sum_{k=l}^{s-l+1} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_i+j_s} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{l-s+1} \binom{(\quad)}{(\quad)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_s=n-j_i+1)}^{(n_{ik}+j_{ik}-j_i-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_s - k_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - k_2)!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!} \cdot \sum_{k=l}^{( )} \sum_{j_s=j_{sa}^{ik}+1}^{( )} \sum_{i=j_{ik}+l_i-l_{ik}}^{l_s+l_i-l} \sum_{n_i=n+l_k}^{n+l_k} \frac{(n_{is}+n_{ik}+j_{ik}+l_{k_1}-n_s-j_i-s-2 \cdot l_k)!}{(n_{is}+n_{ik}+j_s+l_{k_1}-n_s-j_i-n-2 \cdot l_k-j_{sa}^s)!} \cdot \frac{1}{(n+j_{sa}^s-j_s-s)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$D > n \wedge l \neq i \wedge l_s \leq D - n + 1 \wedge$$

$$D + l_s + s - n - l_i + 1 \leq l \leq i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=1}^{(l_s - l + 1)} \sum_{j_s=2}^{(l_{ik} + s - l)} \sum_{j_i=1}^{(n + s - D - j_{sa}^{ik})} \sum_{n_i=1}^{(n - j_{sa}^{ik} + 1)} \sum_{n_{is}=\mathbb{k}}^{(n - j_{ik} - \mathbb{k}_1)} \sum_{n_{ik}=\mathbb{k}_2 - j_{ik} + 1}^{(n_{ik} + j_{ik} - j_i - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!} \cdot \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{(\cdot)} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\cdot)}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i}^{(l_s+s-l)} \sum_{(j_i=l_{ik}+n+s-D-j_{ik}^{ik})}^{(\cdot)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{ik}}^{(\cdot)} \sum_{(n_{ik}=n_{is}+j_{ik}-j_i)}^{(\cdot)}$$

$$\frac{(n_{is} + n_{ik} + j_{ik} + \dots - j_i - s - 2 \cdot l_k)!}{(n_{is} + n_{ik} + j_{ik} + \dots + l_{k1} - j_i - \dots - l_{ks} - j_{sa}^s)!}$$

$$\frac{1}{+ j_{sa}^s - j_s - s)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l \neq 1 \wedge l_s \leq D - n - 1 \wedge$

$D + l_s + s - \dots - l_i + \dots < l \leq l_i - 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} - 1 \wedge j_s + \dots \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$

$j_{ik} + s - \dots \leq j_i \leq n$

$l_{ik} - j_{sa}^{ik} + 1 \leq l_s \wedge l_{ik} - j_{sa}^{ik} - s = l_{ik} \wedge$

$D + l_s - \dots < l_i \leq D + l_s + s - n - 1 \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa}^s - j_{sa}^s - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$

$s > 4 \wedge s = s + k \wedge$

$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=l}^{(l_s-l+1)} \sum_{(j_s=2)}^{(l_s-l+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-l+1} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}+1}^{n_{is}+j_s-j_{ik}} \sum_{(n_{ik}+j_{ik}+j_i-l_{k_2})}^{(n_{ik}+j_{ik}+j_i-l_{k_2})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{ik} - l_{k_2} - 1)!}{(j_i - l_{k_2} - 1)! \cdot (n_{is} + j_{ik} - n_s - j_i - l_{k_2})!}$$

$$\frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - j_i)!}$$

$$\frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - j_i)!}$$

$$\sum_{k=l}^{( )} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{( )}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-l} \sum_{(j_i=j_{ik}+l_i-l_{ik})}^{( )}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{\binom{(\cdot)}{n_s=n_{ik}+j_{ik}-j_i-k_2}} \frac{(n_{is} + n_{ik} + j_{ik} + k_1 - n_s - j_i - s - 2 \cdot k)!}{(n_{is} + n_{ik} + j_s + j_{ik} + k_1 - n_s - j_i - n - 2 \cdot k - j_{sa}^s)!} \cdot \frac{1}{(n + j_{sa}^s - j_s - 1)!} \frac{(l_s - l - 1)!}{(l_s - j_s - l + 1)! (j_s - 2)!} \frac{(D - 1)!}{(D + j_{sa}^s - n - l_i)! \cdot (n - j_i)!}$$

$D \geq n < n \wedge l = i \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{ik} - j_{sa}^{ik} - 1$

$j_{ik} + s - j_{sa}^{ik} \leq j_i \leq n \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$

$l_{ik} \leq D + j_{sa}^{ik} - n \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, \dots, k_2, j_{sa}^i\} \wedge$

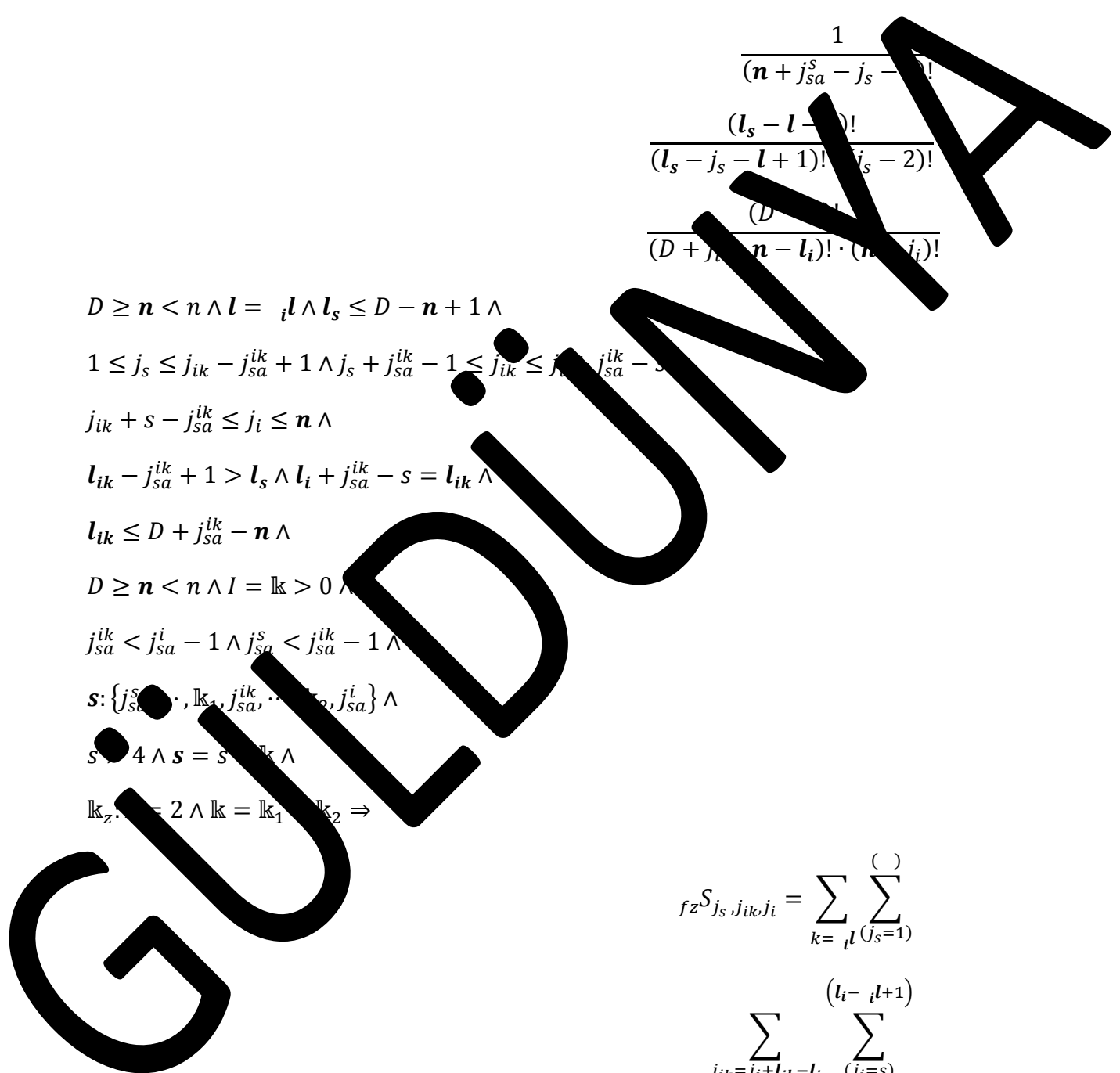
$s \geq 4 \wedge s = s - k \wedge$

$k_z = 2 \wedge k = k_1 + k_2 \Rightarrow$

$$fz^{S_{j_s, j_{ik}, j_i}} = \sum_{k=1}^{\binom{(\cdot)}{j_s=1}} \sum_{i=l}^{\binom{(\cdot)}{j_s=1}}$$

$$\sum_{j_{ik}=j_i+l_{ik}-l_i} \sum_{\binom{(l_i - i + 1)}{j_i=s}}$$

$$\sum_{n_i=n+k}^n \sum_{\binom{(n_i - j_{ik} - k_1 + 1)}{n_{ik}=n+k_2 - j_{ik} + 1}} \sum_{\binom{(n_{ik} + j_{ik} - j_i - k_2)}{n_s=n - j_i + 1}}$$



$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_s - \mathbb{k}_2 - 1)!}{(j_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_s - j_i - \mathbb{k}_2)!} \cdot \frac{(n_s - 1)!}{(n_s + j_i - n - 1)! \cdot (n - 1)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} - 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (l_s - j_{sa}^{ik})!} \cdot \frac{(D - l_i)!}{(D + j_i - n - l_i)! \cdot (n - l_i)!} \cdot \sum_{j_s=1}^{(n)} \sum_{j_{ik}=j_{sa}^{ik}}^{(n)} \sum_{j_i=s}^{(n)} \sum_{n_i=n+l, n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1, n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2}^{(n)} \frac{(n_i - n_{ik} + j_{ik} - \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_{ik} + j_{ik} + j_s + j_i + \mathbb{k})! \cdot (n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n - s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq l_i < n \wedge l = l_i \wedge l_i \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge n_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_i + j_{sa}^{ik} - s \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j_i \leq n \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} > l_s \wedge l_i + j_{sa}^{ik} - s = l_{ik} \wedge$$

$$l_{ik} - j_{sa}^{ik} - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa}^{ik} < j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, \mathbb{k}_2, j_{sa}^i\} \wedge$$

$s > 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j_i} = \sum_{k=i}^{\binom{()}{l}} \sum_{(j_s=1)}^{\binom{()}{l}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{ik}-i^{l+1}} \sum_{(j_i=1)}^{\binom{()}{l+l_i-l_{ik}}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-1)}^{(n_i-j_{ik}-\mathbb{k}_1)} \sum_{(n_s=n-j_i)}^{(n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_{ik}-\mathbb{k}_1-1)!}{(j_i-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!}$$

$$\frac{(n_{ik}-n_s-\mathbb{k}_2-1)!}{(j_i-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_s-j_i-\mathbb{k}_2)!}$$

$$\frac{(n_s-1)!}{(n_s-j_i-n-1)! \cdot (n-j_i)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(l_{ik}-j_{ik}-l_s+1)! \cdot (j_{ik}-j_{sa}^{ik})!}$$

$$\frac{(D-l_i)!}{(D+j_i-n-l_i)! \cdot (n-j_i)!}$$

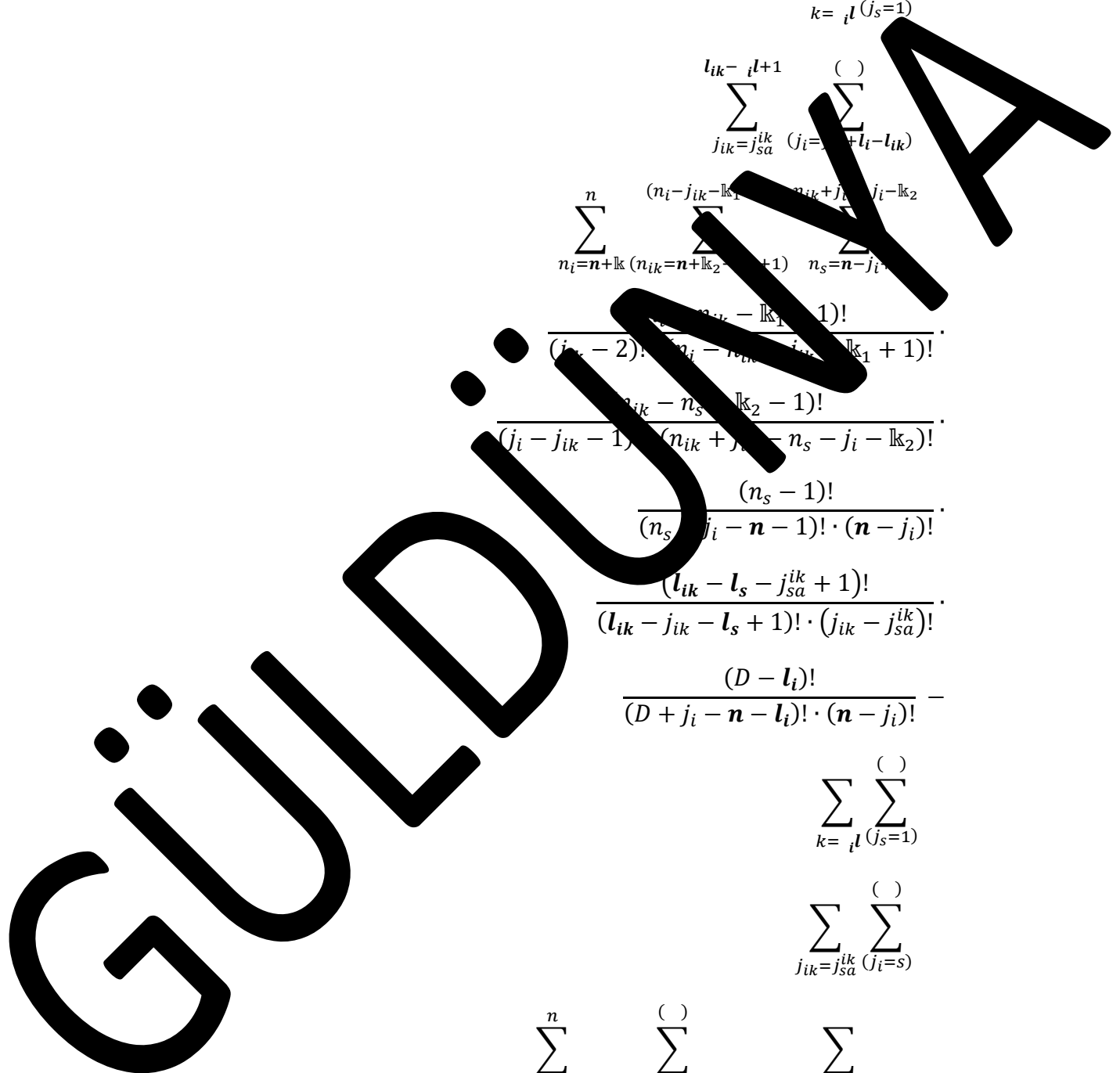
$$\sum_{k=i}^{\binom{()}{l}} \sum_{(j_s=1)}^{\binom{()}{l}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{\binom{()}{l}} \sum_{(j_i=s)}^{\binom{()}{l}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{\binom{()}{l}} \sum_{(n_s=n_{ik}+j_{ik}-j_i-\mathbb{k}_2)}$$

$$\frac{(n_i + n_{ik} + j_{ik} + \mathbb{k}_1 - n_s - j_i - s - 2 \cdot \mathbb{k})!}{(n_i + n_{ik} + j_s + j_{ik} + \mathbb{k}_1 - n_s - j_i - n - 2 \cdot \mathbb{k} - j_{sa}^s)! \cdot (n-s)!}$$

$$\frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}$$



## DİZİN

## B

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.1.1.1.1/3-4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.1.1.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.1.1.2.1/3-4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.1.2.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.1.1.3.1/3-4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.1.3.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.1.1.1.1/230-231

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.1.1.1/187-188

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.1.1/321

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.1.1.2.1/230-231

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.1.2.1/187-188

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.2.1/321

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bir bağımsız durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.1.1.3.1/230-231

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.1.3.1/187-188

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.1.3.1/321

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.1.4.1.1/3-4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.4.1.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.4.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.1.4.2.1/3-4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.4.2.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.4.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.1.4.3.1/3-4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.4.3.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.1.4.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bağımsız durumlu

simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.1.1.1/233

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.1.1/190

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.1.1.1/324-325

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.1.1.2/233

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.1.2/190

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.1.1.2/324-325

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bağımsız durumlu bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.1.1.3/233

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.1.3/190

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.1.1.3/324-325

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.1.1.4/233

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.1.4/190

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.1.1.4/324-325

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.1.6.2.1/3-4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.6.2.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.1.6.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu

bağımlı simetrisinin son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.1.6.3.1/3-4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.6.3.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.1.6.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin durumuna bağlı

tek kalan simetrik olasılık,  
2.3.3.1.1.1.1/118

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.1.1/80-81

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.1.1.1/165

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin durumuna bağlı

tek kalan simetrik olasılık,  
2.3.3.1.1.2.1/118

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.2.1/80-81

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.1.2.1/165

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin durumuna bağlı

tek kalan simetrik olasılık,  
2.3.3.1.1.3.1/118

tek kalan düzgün simetrik olasılık,  
2.3.3.2.1.3.1/80-81

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.1.3.1/165

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.2.1.1.1/4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.2.1.1.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.2.1.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.2.1.2.1/4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.2.1.2.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.2.1.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı durumlu bağımlı  
simetrisinin ilk ve son durumunun  
bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.2.1.3.1/4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.2.1.3.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.2.1.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımlı durumlu  
simetrisinin ilk ve son durumunun  
bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.2.2.1.1/5

tek kalan düzgün simetrik olasılık,  
2.3.3.2.2.2.1.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.2.2.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımlı durumlu  
bağımsız simetrisinin ilk ve son durumunun  
bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.2.2.2.1/3-4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.2.2.2.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.2.2.2.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımlı durumlu  
bağımlı simetrisinin ilk ve son durumunun  
bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.2.2.3.1/4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.2.2.3.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.2.2.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumlu  
simetrisinin ilk ve son durumunun  
bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.2.4.1.1/4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.2.4.1.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.2.4.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumlu  
bağımsız simetrisinin ilk ve son durumunun  
bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.2.4.2.1/4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.2.4.2.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.2.4.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumlu  
bağımlı simetrisinin ilk ve son durumunun  
bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.2.4.3.1/4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.2.4.3.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.2.4.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bağımsız durumlu  
simetrisinin ilk ve son durumunun  
bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.2.6.1.1/4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.2.6.1.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.2.6.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bağımsız durumlu  
bağımsız simetrisinin ilk ve son durumunun  
bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.2.6.2.1/4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.2.6.2.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.2.6.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bağımsız durumlu  
bağımlı simetrisinin ilk ve son durumunun  
bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.2.6.3.1/4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.2.6.3.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.2.6.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımsız durumlu  
simetrisinin ilk ve son durumunun  
bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.2.7.1.1/5

tek kalan düzgün simetrik olasılık,  
2.3.3.2.2.7.1.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.2.7.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımsız durumlu  
bağımsız simetrisinin ilk ve son durumunun  
bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.2.7.2.1/5

tek kalan düzgün simetrik olasılık,  
2.3.3.2.2.7.2.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.2.7.2.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımlı durumlu  
bağımlı simetrisinin ilk ve son durumunun  
bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.3.2.7.3.1/5

tek kalan düzgün simetrik olasılık,  
2.3.3.2.3.2.7.3.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.3.2.7.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı durumlu simetrisinin ilk  
ve herhangi bir durumunun bulunabileceği  
olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.3.2.1.1/4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.3.2.1.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.3.2.1.1/5

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı durumlu bağımsız  
simetrisinin ilk ve herhangi bir durumunun  
bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.3.1.2.1/4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.3.1.2.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.3.1.2.1/5

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı durumlu bağımlı  
simetrisinin ilk ve herhangi bir durumunun  
bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.3.1.3.1/4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.3.1.3.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.3.1.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımlı durumlu  
simetrisinin ilk ve herhangi bir durumunun  
bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.3.2.1.1/5

tek kalan düzgün simetrik olasılık,  
2.3.3.2.3.2.1.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.3.2.1.1/7

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımlı durumlu  
bağımsız simetrisinin ilk ve herhangi bir  
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.3.2.2.1/5

tek kalan düzgün simetrik olasılık,  
2.3.3.2.3.2.2.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.3.2.2.1/7

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımlı durumlu  
bağımlı simetrisinin ilk ve herhangi bir  
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.3.2.3.1/4

tek kalan düzgün simetrik olasılık,  
2.3.3.2.3.2.3.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.3.2.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı durumlu simetrisinin  
herhangi iki durumuna bağlı





tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.5.2.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.1.1.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.1.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.1.2.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.1.2.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.1.3.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.1.3.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.2.1.1/11

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.2.1.1/11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.2.2.1/11

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.2.2.1/11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk ve herhangi iki

durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

tek kalan simetrik olasılık, 2.3.3.1.8.2.3.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.8.2.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.6.1.1.1/4

tek kalan düzgün simetrik olasılık, 2.3.3.2.6.1.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.6.1.1.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.6.1.2.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.6.1.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.6.1.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.6.1.3.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.6.1.3.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.6.1.3.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.6.2.1.1/6

tek kalan düzgün simetrik olasılık, 2.3.3.2.6.2.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.6.2.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.6.2.2.1/6

tek kalan düzgün simetrik olasılık,  
2.3.3.2.6.2.2.1/4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.6.2.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımlı durumlu  
bağımlı simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.6.2.3.1/5

tek kalan düzgün simetrik olasılık,  
2.3.3.2.6.2.3.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.6.2.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumlu  
simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.6.4.1.1/5

tek kalan düzgün simetrik olasılık,  
2.3.3.2.6.4.1.1/4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.6.4.1.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumlu  
bağımsız simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.6.4.2.1/5-6

tek kalan düzgün simetrik olasılık,  
2.3.3.2.6.4.2.1/4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.6.4.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumlu  
bağımlı simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.6.4.3.1/5

tek kalan düzgün simetrik olasılık,  
2.3.3.2.6.4.3.1/4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.6.4.3.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bağımsız durumlu  
simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.6.6.1.1/5

tek kalan düzgün simetrik olasılık,  
2.3.3.2.6.6.1.1/4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.6.6.1.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bağımsız durumlu  
bağımsız simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.6.6.2.1/5-6

tek kalan düzgün simetrik olasılık,  
2.3.3.2.6.6.2.1/4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.6.6.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bağımsız durumlu  
bağımlı simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.6.6.3.1/5

tek kalan düzgün simetrik olasılık,  
2.3.3.2.6.6.3.1/4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.6.6.3.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımsız durumlu  
simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.6.7.1.1/6

tek kalan düzgün simetrik olasılık,  
2.3.3.2.6.7.1.1/4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.6.7.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımsız durumlu  
bağımsız simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.6.7.2.1/6

tek kalan düzgün simetrik olasılık,  
2.3.3.2.6.7.2.1/4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.6.7.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımsız-bağımsız durumlu  
bağımlı simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık,  
2.3.3.1.6.7.3.1/5

tek kalan düzgün simetrik olasılık,  
2.3.3.2.6.7.3.1/3-4

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.6.7.3.1/5

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

tek kalan simetrik olasılık,  
2.3.3.1.9.1.1.1/7

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.9.1.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı durumlu bağımsız  
simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre  
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,  
2.3.3.1.9.1.2.1/7

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.9.1.2.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı durumlu bağımlı  
simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre  
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,  
2.3.3.1.9.1.3.1/7

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.9.1.3.1/7-8

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

tek kalan simetrik olasılık,  
2.3.3.1.9.2.1.1/11

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.9.2.1.1/11

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

tek kalan simetrik olasılık,  
2.3.3.1.9.2.2.1/11

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.9.2.2.1/11

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

tek kalan simetrik olasılık,  
2.3.3.1.9.2.3.1/7

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.9.2.3.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumlu  
simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre  
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,  
2.3.3.1.9.4.1.1/7

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.9.4.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumlu  
bağımlı simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre  
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,  
2.3.3.1.9.4.2.1/7

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.9.4.2.1/11

Bağımlı ve bir bağımsız olasılıklı farklı  
dizilimsiz bağımlı-bir bağımsız durumlu  
bağımlı simetrisinin ilk herhangi bir ve son  
durumunun bulunabileceği olaylara göre  
herhangi bir ve son duruma bağlı

tek kalan simetrik olasılık,  
2.3.3.1.9.4.3.1/7

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.9.4.3.1/11

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

tek kalan simetrik olasılık,  
2.3.3.1.9.6.1.1/7

tek kalan düzgün olmayan simetrik  
olasılık, 2.3.3.3.9.6.1.1/11

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

tek kalan simetrik olasılık, 2.3.3.1.9.6.2.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.9.6.2.1/11

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

tek kalan simetrik olasılık, 2.3.3.1.9.6.3.1/7

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.9.6.3.1/11

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

tek kalan simetrik olasılık, 2.3.3.1.9.7.1.1/11

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.9.7.1.1/11

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

tek kalan simetrik olasılık, 2.3.3.1.9.7.2.1/11

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.9.7.2.1/11

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

tek kalan simetrik olasılık, 2.3.3.1.9.7.3.1/11

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.9.7.3.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.1.1.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.1.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.1.1.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.1.2.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.1.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.1.2.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.1.3.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.1.3.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.1.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.2.1.1/7

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.2.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.2.1.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.2.2.1/7

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.2.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.2.2.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.2.3.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.2.3.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.2.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.4.1.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.4.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.4.1.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.4.2.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.4.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.4.2.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.4.3.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.4.3.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.4.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.6.1.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.6.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.6.1.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.6.2.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.6.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.6.2.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.6.3.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.6.3.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.6.3.1/7

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.7.1/7

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.7.1.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.7.1.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.7.2.1/7

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.7.2.1/4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.7.2.1/10-11

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

tek kalan simetrik olasılık, 2.3.3.1.7.7.3.1/5

tek kalan düzgün simetrik olasılık, 2.3.3.2.7.7.3.1/3-4

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.7.7.3.1/7

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

tek kalan simetrik olasılık, 2.3.3.1.10.1.1.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.1.1.1/10

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

tek kalan simetrik olasılık, 2.3.3.1.10.1.2.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.1.2.1/10

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

tek kalan simetrik olasılık, 2.3.3.1.10.1.3.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.1.3.1/10

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

tek kalan simetrik olasılık, 2.3.3.1.10.2.1.1/15

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.2.1.1/16

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

tek kalan simetrik olasılık, 2.3.3.1.10.2.2.1/15-16

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.2.2.1/16

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

tek kalan simetrik olasılık, 2.3.3.1.10.2.3.1/9-10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.2.3.1/10

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

tek kalan simetrik olasılık, 2.3.3.1.10.4.1.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.4.1.1/16

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

tek kalan simetrik olasılık, 2.3.3.1.10.4.2.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.4.2.1/16

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

tek kalan simetrik olasılık, 2.3.3.1.10.4.3.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.4.3.1/16

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

tek kalan simetrik olasılık, 2.3.3.1.10.6.1.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.6.1.1/16

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

tek kalan simetrik olasılık, 2.3.3.1.10.6.2.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.6.2.1/16

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

tek kalan simetrik olasılık, 2.3.3.1.10.6.3.1/9

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.6.3.1/16

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

tek kalan simetrik olasılık, 2.3.3.1.10.7.1.1/15-16

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.7.1.1/16

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

tek kalan simetrik olasılık, 2.3.3.1.10.7.2.1/15-16

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.7.2.1/16

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

tek kalan simetrik olasılık, 2.3.3.1.10.7.3.1/9-10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.10.7.3.1/9-10

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.1.1.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.1.1.1/10-11

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

tek kalan simetrik olasılık, 2.3.3.1.11.1.2.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.1.2.1/10-11

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

tek kalan simetrik olasılık, 2.3.3.1.11.1.3.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.1.3.1/10-11

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

tek kalan simetrik olasılık, 2.3.3.1.11.2.1.1/17-18

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.2.1.1/17-18

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

tek kalan simetrik olasılık, 2.3.3.1.11.2.2.1/17

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.2.2.1/17-18

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

tek kalan simetrik olasılık, 2.3.3.1.11.2.3.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.2.3.1/10-11

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

tek kalan simetrik olasılık, 2.3.3.1.11.4.1.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.4.1.1/17-18

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

tek kalan simetrik olasılık, 2.3.3.1.11.4.2.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.4.2.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.4.3.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.4.3.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.6.1.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.6.1.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.6.2.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.6.2.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.6.3.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.6.3.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.7.1.1/17

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.7.1.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son

durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.7.2.1/17

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.7.2.1/17-18

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

tek kalan simetrik olasılık, 2.3.3.1.11.7.3.1/10

tek kalan düzgün olmayan simetrik olasılık, 2.3.3.3.11.7.3.1/10-11



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 hariç dağılımın başlayabileceği diğer bir bağımlı durum olan ve bağımsız olasılıklı durumla başlayan dağılımın aynı ilk bağımlı durumuyla başlayan dağılımlarda, simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre tek kalan düzgün olmayan simetrisinin tanım ve eşitliklerinden oluşmaktadır.

VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre tek kalan 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 hariç dağılımın başlayabileceği diğer bir bağımlı durum olan ve bağımsız olasılıklı durumla başlayan dağılımın aynı ilk bağımlı durumuyla başlayan dağılımlarda, simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi iki ve son duruma bağlı tek kalan düzgün olmayan simetrisinin olasılığının tanım ve eşitlikleri verilmektedir.

VDOİHİ’nin diğer ciltlerinde olduğu gibi bu ciltte de verilen ana eşitlikler, olasılık tablolarından elde edilen verilerle üretilmiştir. Diğer eşitlikler ise ana eşitliklerden teorik yöntemle üretilmiştir. Eşitlik ve tanımların üretilmesinde diğer kaynak kullanılmamıştır.