

VDOİHİ

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

Cilt 2.3.1.3.5.1.1.122

İsmail YILMAZ

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VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık Cilt 2.3.1.3.5.1.1.122

İsmail YILMAZ

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

Dili: Türkçe + Matematik Mantık



K. Atatürk

Türkiye Cumhuriyeti Devleti
Kuruluşunun
100. Yılı Anısına

DÜZELTME

Bu cilt için

$$fzS_{j_s, j_{ik}, j^{sa}}$$

simgesi yerine

$$fzS_{j_s, j_{ik}, j^{sa}}^{DOSD}$$

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

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- ✓ 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

I : simetrisinin bağımsız durum sayısı

ll : simetrisinin bağımlı durumlarından önce bulunan bağımsız durum sayısı

I : simetrisinin bağımlı durumlarından sonra bulunan bağımsız durum sayısı

lk : simetrisinin bağımlı durumları arasındaki bağımsız durumların sayısı

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

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

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

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

l_s : simetrisinin ilk bağımlı durumunun, bağımlı olasılıklı farklı dizilimsiz

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

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

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

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

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

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

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

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

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

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

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

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

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

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

D : bağımlı durum sayısı

D_i : olayın durum sayısı

s : simetrinin bağımlı durum sayısı

s : simetrik durum sayısı. Simetrinin bağımlı ve bağımsız durum sayısı

m : olasılık

M : olasılık dağılım sayısı

U : uyum eşitliği

u : uyum derecesi

s_i : olasılık dağılımı

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

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

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

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

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

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

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

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

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

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durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre simetrik olasılık

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

simetrisinin son durumunun bulunabileceği olaylara göre toplam düzgün simetrik olasılık

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

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

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$f_{z,0} S_{j_s, j^{sa}}^{DOSD}$: bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı

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

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

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$fz, 0S_{\Rightarrow j_s, j_{ik}, j^{sa}, j_i}^{DOSD}$: 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 toplam düzgün olmayan simetrik olasılık

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$fz,0S_{\Rightarrow j_s, \Rightarrow j_{ik}, j^{sa}, j_i, D}^{DOSD}$: 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 toplam düzgün olmayan simetrik olasılık

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

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

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E2

BAĞIMLI ve BİR BAĞIMSIZ OLASILIKLI FARKLI DİZİLİMSİZ DAĞILIMLAR

Bağımlı ve Bir Bağımsız Olasılıklı Farklı Dizilimsiz Dağılımlar

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

bu yüğe sıralanmasıyla elde edilebilen kurallı tablolar kullanılmaktadır. Farklı dizilimsiz dağılımlarda durumların küçükten-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 simetriden ilk durumuyla başlayan dağılımlar), dağılımın ilk durumu hariçinde dağılımın herhangi bir durumuyla başlayan dağılımlar (bunun yerine farklı dizilimli dağılımlarda simetride bulunmayan bir durumuyla başlayan dağılımlar) ve dağılımın ilk durumu hariçinde ilk dağılımının başladığı farklı ikinci durumla başlayıp simetriden 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) dağılımla bağımlı ve bir bağımsız olasılıklı dağılımlar elde edilir. Kurallı 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'nun Çizim 1'de çıkarılan eşitliklerle birleştirilerek, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımların yeni eşitlikleri elde edilecektir. Eşitlikleri adlandırılmasında bağımlı olasılıklı farklı dizilimsiz dağılımlarda kullanılan adlandırmalar kullanılacaktır. Bu adlandırılmasına simetrinin bağımlı ve bağımsız durumlarına göre ve dağılımın bağımsız veya bağımlı durumla başlamasına göre "Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı/bağımsız-bağımlı/bağımlı-bir bağımsız/bağımlı-bağımsız/bağımsız-bağımsız durumlu/bağımsız/bağımlı" kelimeleri getirilerek, simetrinin bağımlı durumlarının bulunabileceği olaylara göre bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz adları elde edilecektir. Simetriden seçilen durumların bulunabileceği olaylara göre simetrik, düzgün simetrik veya düzgün olmayan simetrik olasılık için birden fazla ad kullanılması durumunda gerekmedikçe yeni tanımlama yapılmayacaktır.

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

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

SİMETRİDEN SEÇİLEN ÜÇ DURUMA GÖRE TOPLAM DÜZGÜN OLMAYAN SİMETRİK OLASILIK

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

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

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

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

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

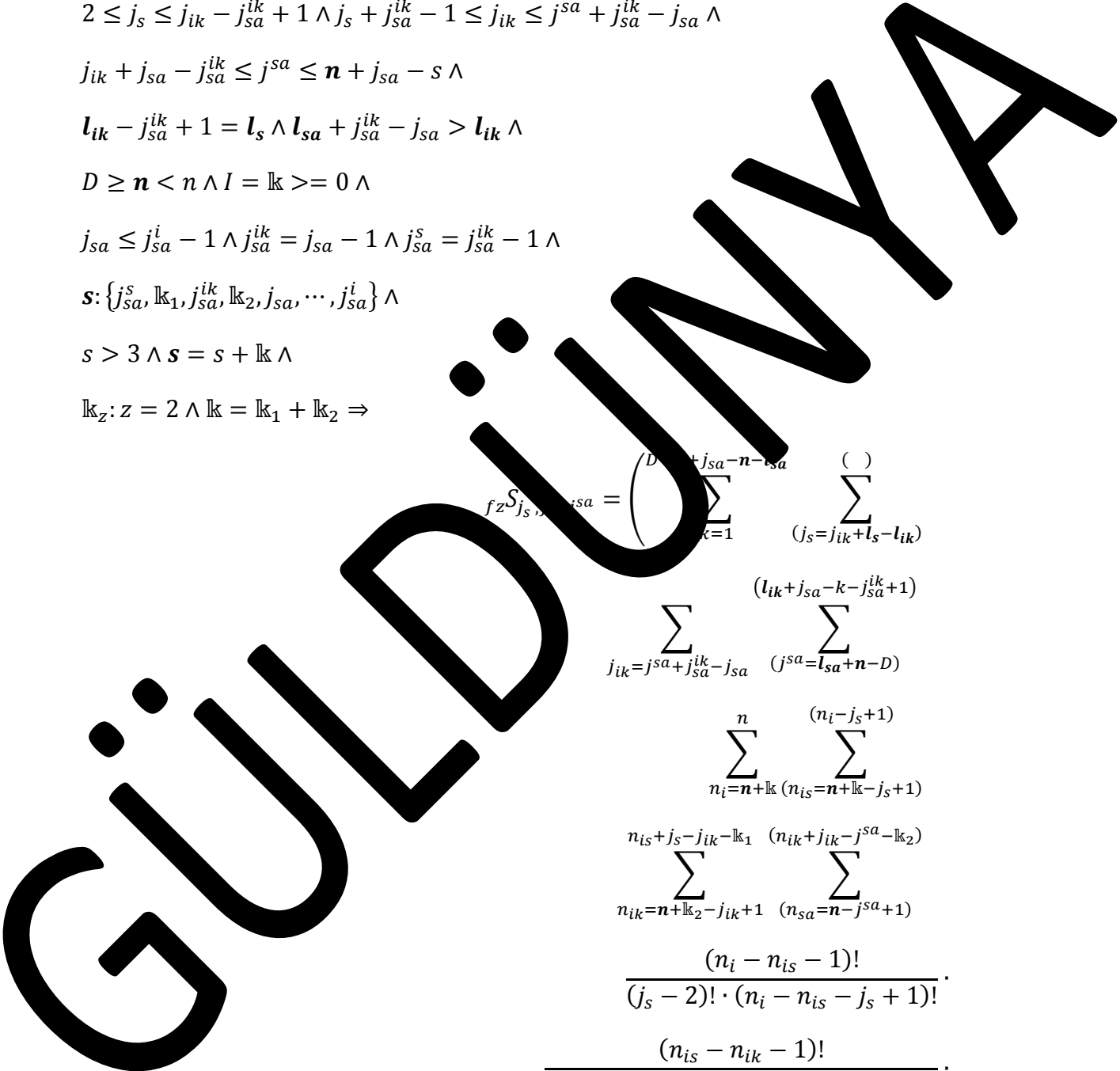
$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

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

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

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

$$f_{z, j_s, j_{sa}, j_{sa}^{ik}} = \binom{D + j_{sa} - n - l_{sa}}{\sum_{k=1}^n} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \binom{(\quad)}{\quad} \sum_{(l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1)} \sum_{(j^{sa} = l_{sa} + n - D)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$



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

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

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

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

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

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

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

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

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

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

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

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

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

$$C_{j_{sa}, j_{ik}, j^{sa}} = \binom{D+l_s+j_{sa}-l_{sa}}{j_s} \sum_{k=1}^{j_s} \binom{()}{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \binom{(l_s+j_{sa}-k)}{(j^{sa}=l_{sa}+n-D)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$fz_{j_s, j_{ik}, j_{sa}}^S = \sum_{k=0}^{(D+l_s+j_{sa}-j_{sa}^{ik})} \sum_{(j_s+l_s-l_{ik})}^{(j_s+l_s-l_{ik})} \sum_{(l_{ik}-k+1)}^{(l_{ik}-k+1)} \sum_{(j_{ik}=l_{sa}+n+j_{sa}-D-j_{sa})}^{(j_{ik}=l_{sa}+n+j_{sa}-D-j_{sa})} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) +$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{j_{ik}=0}^{l_s+j_{sa}^{ik}} \binom{l_s+j_{sa}^{ik}-j_{ik}-D-s}{j_{ik}+j_{sa}-j_{sa}^{ik}}$$

$$\sum_{n_i=0}^{n-l_i} \binom{n-l_i}{n_i+l_k} \binom{n-l_i}{n_i+l_k-j_s+1}$$

$$\sum_{n_{k_1}=0}^{n+l_s+j_s-i_{k_1}-k_1} \binom{n+l_s+j_s-i_{k_1}-k_1}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_{is}-n_{ik}-1)!}{(n_{is}-n_{sa}-1)!}$$

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

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

$$\left. \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \right) +$$

$$\left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \right)$$

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

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

GÜLDÜZÜMÜ

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

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

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

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

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

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

$$\frac{(D - n + 1)!}{(j_s - k - j_{sa}^{ik} + 2)!}$$

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

$$(l_{sa} - k + 1)$$

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{n+l_s+l_s-l_{k_1}}^{(n_{sa}+l_{sa}-l_{k_2})}$$

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

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

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

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

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

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

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

$D \geq n < n - l_{k_1} - l_{k_2} > 0 \wedge$

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

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

$s > j \wedge s = s + l_k \wedge$

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

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

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

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

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

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

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

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

$$(n_i - j_s +$$

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

$$n_{is} + j_{ik} - k_1 \quad (n_{ik} - k_2)$$

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

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

$$(n_{is} - n_{ik} - 1)!$$

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

$$(n_{ik} - n_{sa} - 1)!$$

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

$$(n_{sa} - 1)!$$

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

$$(l_s - k - 1)!$$

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

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

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

$$(D + j_{sa} - l_{sa} - s)!$$

$$(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)! \Big) -$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{k=0}^{D+l_s+j_{sa}-l_{sa}} \sum_{l=0}^{(l_s-k+1)} \binom{l_s-k+1}{l} \binom{l_s-k+1}{n-D-l}$$

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

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

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

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

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

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

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

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

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

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \\
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_s+n-D)}^{(l_{sa}-k+1)} \\
& \sum_{i=n+k}^n \sum_{(n_{is}=n-k+1)}^{(n_{is}-k+1)} \\
& \sum_{n_{ik}=k_2-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{sa}} \sum_{(n_{ik}+j_{ik}-j^{sa}-l_{sa})}^{(n_{sa}-j^{sa}+1)} \\
& \frac{(n_{is}-k+1)!}{(n_{is}-2)! \cdot (n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(n_{is}+j_s-n_{ik}-j_{ik})!} \\
& \frac{(n_{ik}-n_{sa}-1)!}{(j_{ik}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \\
& \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \\
& \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-k)}
\end{aligned}$$

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

$$\sum_{n_{ik}=n_{i_s}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\begin{aligned}
& \sum_{n_{ik}=\mathbf{n}+\mathbf{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbf{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbf{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - 1)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
& \left(\frac{(D + j^{sa} - \mathbf{n} - j^{sa} - s)!}{(D + j^{sa} - \mathbf{n} - j^{sa} - s)! \cdot (n_{sa} - j^{sa} - s)!} + \right. \\
& \left. \sum_{j_s=l_{sa}+\mathbf{n}-D-j_{sa}+1}^{(D+l_s+j_{sa}-l_{sa})} \sum_{(j_s=l_{sa}+\mathbf{n}-D-j_{sa}+1)}^{(l_s-k+1)} \right) \\
& \sum_{j_{ik}=j_s+j_{sa}^{ik}}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
& \sum_{n_i=\mathbf{n}+\mathbf{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbf{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=\mathbf{n}+\mathbf{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbf{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbf{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
\end{aligned}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GÜLDÜZMAYA

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{k=0}^{D+l_s+j_{sa}} \binom{D+l_s+j_{sa}}{k} \binom{j_{ik}}{j_{sa}^{ik}} \binom{j_s}{j_s - k}$$

$$\sum_{k_1=0}^{l_s} \sum_{k_2=0}^{k_1} \binom{l_s}{k_1} \binom{l_s - k_1}{k_2} \binom{n}{n - k_1 - k_2} \binom{n - k_1 - k_2}{n - k_1 - k_2 - D} \binom{j^{sa}}{j_{ik} + l_{sa} - l_{ik}}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GÜLDENWA

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \binom{(\quad)}{n_{sa}=n_{ik}+j_{sa}-k_2}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - k_1 - j_s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s - j_{sa} - j^{sa} - s)!} \cdot \frac{(l_{sa} - k - 1)!}{(j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - k)!}{(D + j^{sa} + s - n - k - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GÜLDÜZYA

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa})!}$$

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

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

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

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

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

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

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

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

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

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

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

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

$$\mathbb{k}_z: z = 1 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)}$$

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

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

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

$((D \geq n < n \wedge l_s > D - n + 1 \wedge$
 $2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$
 $j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$
 $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge (l_i + j_{sa} - s = l_{sa}) \vee$
 $(D \geq n < n \wedge l_s > D - n + 1 \wedge$
 $2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$
 $j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$
 $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge (l_i + j_{sa} - s > l_{sa})) \wedge$
 $D > n < n \wedge I = \mathbb{k}_z = 0 \wedge$
 $j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$
 $s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, j_{sa}^{ik}, j_{sa}^i, j_{sa}^i\} \wedge$
 $s > 3 \wedge s > s + \mathbb{k} \wedge$
 $\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$l_{sa} \wedge I = \mathbb{k} \geq 0 \wedge$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$D \geq n < n \wedge l_s > D - n \wedge l_{sa} \wedge$
 $2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j_{sa}^{sa} + j_{sa}^{ik} - j_{sa} \wedge$
 $j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - s \wedge$
 $l_{k1} - j_{sa}^{ik} + 1 \leq l_{k2} \wedge l_{sa} - j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$
 $D \geq n < n \wedge l = l_{k1} = 0 \wedge$
 $j_{sa} \leq j_{sa}^{sa} - 1 \wedge j_{sa}^{ik} = j_{sa}^{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$
 $s: \{j_{sa}^s, l_{k1}, j_{sa}^{ik}, j_{sa}^{sa}, j_{sa}^i, j_{sa}\} \wedge$
 $s > 3 \wedge j_{sa} = s + l_{k1} \wedge$
 $l_{k2}: z = 2 \wedge l_{k2} = l_{k1} + l_{k2} \Rightarrow$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{(n_{is}=n_{ik}+1)}^{n} \sum_{(n_{ik}=n_{ik_2}-j_{ik})}^{(n_{ik}+1)}$$

$$\sum_{(n_{ik}=n_{ik_2}-j_{ik})}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_{ik}+1)}$$

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

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

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

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

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)}$$

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

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

$$\frac{(D - 1)!}{(D + j^{sa} - n - l_{sa})! \cdot (n - l_{sa} - j^{sa} - 1)!}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{()} \sum_{(n_{ik}=n_{ik}+j_{ik}-j^{sa}-l_i)}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j_{sa}^{ik} - k_1 - l_{sa} - j_{sa}^s)!}{(n_i - n - k_1 - l_{sa} - j_{sa}^{ik} - j_{sa}^s - j_{sa}^s)!} \cdot \frac{(n_{ik} - k_1 - l_{sa} - j_{sa}^s)!}{(n_{ik} - k_1 - l_{sa} - j_{sa}^s - 1)!} \cdot \frac{(n_{ik} - k_1 - l_{sa} - j_{sa}^s)!}{(n_{ik} - k_1 - l_{sa} - j_{sa}^s + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - k_1 - l_{sa} - j_{sa}^s)!}{(n_{ik} - k_1 - l_{sa} - j_{sa}^s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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

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

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

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

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

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

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

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

$$l_{sa} \wedge I = k \geq 0 \wedge$$

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

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

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

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

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

GÜLDÜMÜSÜ

A

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{k=1}^{j_s} \binom{()}{j_s=1}$$

$$\sum_{j_{sa}=j_{sa}}^{j_{sa}^{ik}}$$

$$\sum_{n_i=n+l_k}^{n} \sum_{n_i=n+l_{k_2}}^{n+l_{k_2}+1} \sum_{n_{sa}=n-j_{sa}+1}^{n} (n_i - n_{ik} - j_{ik} - 1)! \cdot (n_i - n_{ik} - j_{ik} + 1)! \cdot (n_i - n_{sa} - 1)! \cdot (n_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_i - n_{sa} - 1)!}{(n_i - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

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

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

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

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

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

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

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

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

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

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

$$\sum_{k=1}^{i-1} \sum_{j_s=1}^{(i-k)} \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{j^{sa}=j_{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-n_{ik}-l_{k_1}+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

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

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

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

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

$$\left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -$$

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

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

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

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

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

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

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

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

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

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

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

$$fz \mathcal{S}_{j_s, j_{ik}, j_{sa}} = \left(\sum_{k=1}^{i^{l-1}} \sum_{\substack{(\quad) \\ (j_s = \dots + l_s - l_{ik}) \\ (l_s = \dots - k) \\ j_{ik} = j_{sa} + \mathbb{k} - j_{sa} \quad (j_{sa} = j_{sa}) \\ n \quad (n_i - j_s + 1) \\ \sum_{n_i = n + \mathbb{k} \quad (n_{is} = \dots - j_s + 1)} \\ + j_s - j_{ik} = \dots \quad (n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2) \\ n_{ik} = n + \dots - j_{ik} + 1 \quad (n_{sa} = n - j_{sa} + 1) \\ (n_i - n_{is} - 1)! \\ (j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)! \\ (n_{is} - n_{ik} - 1)! \\ (j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})! \\ (n_{ik} - n_{sa} - 1)! \\ (j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})! \\ (n_{sa} - 1)! \\ (n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})! \\ (l_s - k - 1)! \\ (l_s - j_s - k + 1)! \cdot (j_s - 2)! \\ (D + j_{sa} - l_{sa} - s)! \\ (D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)! + \right.$$

$$\sum_{k=1}^{(\quad)} \sum_{l \quad (j_s=1)}$$

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

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

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

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

$D \geq n < n \wedge l_{sa} \leq D + j_s \wedge n \wedge$
 $1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$
 $j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - j_{sa}^{ik} \wedge$
 $l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_s + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$
 $D \geq n < n \wedge I = \dots \geq 0 \wedge$
 $j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$
 $s: \{j_{sa}^s, l_{k_1}, j_{sa} - l_{k_2}, j_{sa}, \dots, l_{sa}^i\} \wedge$
 $s > j_{sa} = s + l_{k_1} \wedge$
 $l_{k_2}: z = 2 \wedge \dots = l_{k_1} + l_{k_2} \Rightarrow$

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

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

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

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

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

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

$$\sum_{n_{ik}=n_{sa}^{ik}-j_{ik}+1}^{(n_i-j_{ik}-k_1)} \sum_{(n_{is}=n_{sa}^{ik}+j_{ik}-j_{sa}^{ik}-k_2)}^{(n_i-j_{ik}-k_1)}$$

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

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

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

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

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

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

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

$$\sum_{k=i^l}^{()} \sum_{(j_s=1)}$$

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

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

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum^{(\cdot)}_{(j^{sa}=j_{sa})}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum^{(\cdot)}_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}}$$

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum^{(\cdot)}_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

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

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

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

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

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

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

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

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

$$\sum_{k=1}^{i-1} \sum_{j_s=1}^{(i-k)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{j_{sa}=j_{sa}}^{(i-k)}$$

$$\sum_{i=n+k}^n \sum_{(n_{ik}=n+k_2-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2}$$

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

$$\sum_{k=1}^{()} \sum_{(j_s=1)}$$

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

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

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

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

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

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

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

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

$$\sum_{j_{ik}=1}^{n_i} \binom{n_i - j_{ik} + 1}{j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik}}$$

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

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

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

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

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

$$\sum_{k=1}^{()} \sum_{j_s=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - \dots)!}$$

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

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

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

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

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

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

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

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

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

$$fz S_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{i^{l-1} (l_{ik}-k-j_{sa}^{ik}+2)} \sum_{(j_s=2)} \right)$$

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

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

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

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

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

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

$$\sum_{k=1}^{l_s} \sum_{i=1}^{l_s} \sum_{j_{ik}=j_{sa}}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \sum_{n_{sa}=n - j^{sa} + 1}^{(n_i - n_{ik} - 1)!} \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

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

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

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

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

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

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

$$\sum_{k=0}^{i^{l-1} (l_s - k)}$$

$$\sum_{j_{ik}=j_s + \dots - l_s} \sum_{(j_{sa}=j_s)} \dots$$

$$(n_i - j_s + 1)$$

$$\sum_{\dots} \sum_{\dots} \dots$$

$$n_{ik} = n_{is} + j_s - \dots - l_{k_1} \quad (n_{sa} = n_{ik} + j_{ik} - j_{sa} - l_{k_2})$$

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

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

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

$$\sum_{k=0}^{i^l} \sum_{(j_s=1)}^{i^l}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa}=j_{sa})}^{i^l}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{i^l} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2}}$$

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

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

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

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

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

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

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

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

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

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz_{j_{ik}, j_{sa}} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{j_s=2}^{()}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n_i-j_{ik}-l_{ik}+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \frac{(n_i - n_{ik} - j_{ik} + 1)!}{(n_i - n_{sa} - 1)!} \cdot \frac{(n_{ik} + j_{ik} - n_{sa} - j^{sa})!}{(n_{sa} - 1)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} +$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} +$$

$$\left(\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \right)$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_{sa}-k+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_i=n+l_{k_2}}^n \sum_{(n_{is}=n+l_{k_2}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

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$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (l_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{sa})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{(\cdot)} \sum_{i=1}^{(\cdot)} \\
& \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j^{sa}=j_{sa}+1)} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \\
& \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{sa})} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n_{ik}-k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - k_1 - k_2 - j_{sa}^s)!}{(n_i - n - k_1 - k_2)! \cdot (n_{is} + j_{sa} - j^{sa} - k_1 - k_2 - j_{sa}^s)!} \\
& \frac{(l_s - k - 1)!}{(n_i - j_s - k + 1)! \cdot (j_s - 2)!} \\
& \frac{(D - l_i)!}{(D + s - n - l_i - j_{sa} - k_1 - k_2 - j_{sa}^s - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \\
& \sum_{k=1}^{i^l} \sum_{(j_s=1)} \\
& \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}} = \binom{D+l_s+j_{sa}-n-l_{sa}}{\sum_{k=1}^n} \binom{j_s=j_{ik}+l_s-l_{ik}}{\sum_{j_{sa}=j_{sa}+j_{sa}^{ik}-j_{sa}^{ik}+1}} \binom{j_{sa}=l_{sa}+n-D}{\sum_{j_{sa}=j_{sa}+j_{sa}^{ik}-j_{sa}^{ik}+1}} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \left. \right) + \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$\left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{\quad}{\quad} \right)$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j_{sa}+j_{ik}-k_2)}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!}$$

$$\frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!}$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \binom{\quad}{\quad}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j_{sa}=l_{sa}-k+1)}^{(l_{sa}-k+1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

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$$\begin{aligned}
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - 1)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(j_{ik} + j_{sa}^{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - j_{sa})! \cdot (j^{sa} - j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\
& \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{(j_s)} \sum_{j_s=1}^{(j_s)} \frac{(l_{sa} - i_{l+1})}{\sum_{j_{ik}=j_{sa}^{ik}} (j^{sa}=l_{sa}+n-D)} \sum_{i=n+l_k}^{(n_i - l_{k_1} + 1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \sum_{n_{sa}=n-j^{sa}+1}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{(j_s)}$$

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$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(l_s+j_{sa}-k)}^{(l_s+j_{sa}-k)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{sa}-\mathbb{k}_2)}^{(n_{sa}=n_{ik}+j_{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n_i - j_s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s - j_{sa} - j^{sa} - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_s)!}{(D + j^{sa} + s - n - l_s - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_s^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_s \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n - j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$

$D + j_s - n < l_{sa} \leq D + l_s + j_{sa} - n - 1$

$D > n < n \wedge \mathbb{k} > 0 \wedge$

$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^k - j_{sa} - 1 \leq j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 3 \wedge s = \mathbb{k} \wedge$

$\mathbb{k}_2 = \mathbb{k} - \mathbb{k}_1 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right)$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(l_s+j_{sa}-k)}^{(l_s+j_{sa}-k)}$$

$$\begin{aligned}
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} + j_s - n - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - j_{sa} - s)!}{(D + j_{sa} - j_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right) \\
& \sum_{j_{ik}=j_{sa}^{lk}+1}^{j^{sa}+j_{sa}^{lk}-j_{sa}-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_s+j_{sa}-k)} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-n} \sum_{l_{ik}=l_s-l_{sa}-k}^{(l_s-l_{sa}-k)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{l_s+l_{sa}-k} \sum_{j_{sa}^{ik}=l_s+j_{sa}-k+1}^{(l_{sa}-k+1)} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot
\end{aligned}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \sum_{\binom{(\cdot)}{j_s=j_{ik}+l_s-l_{ik}}} \binom{(\cdot)}{j_s=j_{ik}+l_s-l_{ik}}$$

$$\sum_{j_{ik}=j_{sa}+1}^{l_s+j_{sa}^k-k} \sum_{\binom{(\cdot)}{j_s=j_{sa}+n-D}} \binom{(\cdot)}{j_s=j_{sa}+n-D}$$

$$\sum_{n+l_k}^n \binom{(\cdot)}{n_{is}=n+l_k-k+1} \binom{(\cdot)}{n_{is}=n+l_k-k+1}$$

$$\sum_{n_{ik}=n_{is}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k1}} \sum_{\binom{(\cdot)}{j_s=j_{sa}+1}} \binom{(\cdot)}{j_s=j_{sa}+1}$$

$$\frac{(n_{is} - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_s - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^k - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^k - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=i^l} \sum_{\binom{(\cdot)}{j_s=1}} \binom{(\cdot)}{j_s=1}$$

$$\sum_{j_{ik}=j_{sa}^k} \sum_{\binom{(\cdot)}{j_s=l_{sa}+n-D}} \binom{(\cdot)}{j_s=l_{sa}+n-D}$$

GÜLDÜZÜMÜ

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j^{sa} - j_{sa}^{ik})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik})!} \cdot \\
& \left(\frac{(D - l_s - s)!}{(D - j^{sa} - n - l_{sa} - s)! \cdot (n + j_s - s)!} \right) \cdot \\
& \sum_{k=1}^{D+l_s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\
& \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} (j^{sa}=l_i+n+j_{sa}-D-s) \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}} = \sum_{k=0}^{D+l_s+j_{sa}-l_{sa}} \sum_{l_{ik}=j_{sa}+n+l_{sa}-D-j_{sa}}^{(D+l_s+j_{sa}-l_{sa})} \sum_{j_{ik}=l_{sa}+n+l_{sa}-D-j_{sa}}^{(j_{sa}+l_s-l_{ik})} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_{is}=n+\mathbb{k}-j_s+1)} \sum_{n_{sa}=n-j_{sa}+1}^{(n_i-j_s+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
 & \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \right) \\
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{is}+j_s-j_{ik}-l_{ik}}^{n_{is}+j_s-j_{ik}-l_{ik}} \sum_{(n_{sa}=n-j^{sa}+j_{ik}-l_{ik})}^{n_{is}+j_s-j_{ik}-l_{ik}} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \right) \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\begin{aligned}
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - 1)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(j_{ik} + j_{sa} - j^{sa} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - j_{sa})! \cdot (j^{sa} - j_{sa} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa} - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-\mathbf{n}-l_{sa}+1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \\
& \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=l_{sa}+\mathbf{n}-D)}^{(l_{sa}-k+1)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_s=1)}^{(l_{sa}-i_{l+1})} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{(n_i - l_{k_1} + 1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

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$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-lk_1} \sum_{(n_{sa}=n_{ik}+j_{sa}-lk_2)}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - lk_1 - lk_2)! \cdot (n + j_s - j_{sa} - j^{sa} - s)!}{(n_i - n - lk_1 - lk_2)! \cdot (n + j_s - j_{sa} - j^{sa} - s)!} \cdot \frac{(l_s - k - 1)!}{(j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - s)!}{(D + j^{sa} + s - n - lk - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 < j_{ik} \leq j_{sa}^{ik} + j_{sa} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n - j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_s - n < l_{sa} \leq D + l_s + j_{sa} - n - 1$$

$$D - n < n \wedge n - lk \geq n \wedge$$

$$j_{sa}^{ik} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} \leq j_{sa}^{ik} - 1 \Rightarrow j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge$$

$$s \in \{j_{sa}^{ik}, lk_1, j_{sa}^{ik}, lk_2, j_{sa}, \dots, j_{sa}^{ik}\} \wedge$$

$$s > 3 \wedge s = j_{sa}^{ik} \wedge$$

$$lk_2 = 2 \wedge lk = lk_1 + lk_2 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right)$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} + j_s - n - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (j_s - 1)!} \cdot \\
 & \frac{(n - j_s - n + 1)! \cdot (j_s - 2)!}{(D + j_{sa} - j_{sa} - s)!} \cdot \frac{(D + j_{sa} - j_{sa} - s)!}{(n + j_{sa} - j^{sa} - s)!} + \\
 & \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right) \\
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-k} \sum_{(l_{sa}-k+1)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa})!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-n} \sum_{i=1}^{(j_s - k)} \sum_{i_1=1}^{(i_1 + l_s - l_{ik})} \sum_{i_2=1}^{(i_2 + l_s - l_{ik})} \dots \\
& \sum_{j_{ik}^{sa}+1}^{+n+j_{sa}^{ik}-l_{sa}-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \dots \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \dots \\
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \dots \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot
\end{aligned}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j_s=j_{sa}^{ik}+n-D)}^{(l_{sa}-k+1)}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_k+1)}^{(n_{is}+1)}$$

$$\sum_{n_{ik}=n_{is}-j_{ik}+1}^{n+l_s-j_{ik}-k_1} \sum_{(j_s=j_{sa}^{ik}+1)}^{(n+l_s-j_{ik}-k_2)}$$

$$\frac{(n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_s - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=i}^{()} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j_s=l_{sa}+n-D)}$$

GÜLDENWA

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - l_{ik})!} \cdot \\
& \left(\frac{(D - l_{sa} - s)!}{(D - j^{sa} - n - l_{sa} + j^{sa} - s)!} \right) \cdot \\
& \sum_{k=1}^{D+l_{sa}-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\
& \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_s^{ik}} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}} = \binom{D+l_s+j_{sa}-n-l_{sa}}{j_{ik}-k-j_{sa}^{ik}+2} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{l_{ik}-k-j_{sa}^{ik}+2} \binom{l_{ik}-k-j_{sa}^{ik}+2}{j_{sa}-j_{sa}^{ik}+1} \sum_{j_{ik}=l_{ik}-l_s}^{l_{ik}-l_s} \binom{()}{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\begin{aligned}
 & \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \right. \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n-k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j_{sa}+k_2)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}} \sum_{(n_{sa}=n-j_{sa}+1)} \\
 & \frac{(n_{is}-1)!}{(j_s-1)! \cdot (n_i-j_s+1)!} \cdot \\
 & \frac{(n_{is}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik})! \cdot (n_{sa}-1)!}{(j_{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} + \\
 & \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} + j^{sa} - n - 1)!}{(n_{sa} - n - 1)! \cdot (j^{sa} - 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(n_{ik} - n_{sa} - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} - l_{sa} - j_{sa}^{ik} - l_{ik} - j_{sa})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i_l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
 \end{aligned}$$

GÜLDENSA

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{lk} - j_{sa} - l_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j^{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=i}^{(\cdot)} \sum_{l(j_s=1)}^{(\cdot)} \\
& \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j^{sa}=l_{sa}+n-D)} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{lk} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -
\end{aligned}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j^{ik})}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n-k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{ik}+j_{ik}-j^{sa})}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - k_1 - j^{sa})!}{(n_i - n - k_2)! \cdot (n_i + j_s + j_{sa} - j^{sa} - s - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k_1 + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(j^{sa} + s - n - l_i - j^{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s \leq D - n - 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - s \wedge$

$l_{sa} - j_{sa}^{ik} + 1 \leq l_{sa} \wedge l_{sa} - j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$

$D - l_{sa} - n < l_{sa} \leq D + l_s + n - n - 1 \wedge$

$D \geq n - 1 \wedge I = k \geq 1 \wedge$

$j_{sa} \leq j_{sa}^{i} - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 3 \wedge s = s + k \wedge$

$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \right)$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \binom{(\quad)}{\sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \binom{(\quad)}{\sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \\
 & \sum_{n_{is}+j_s-j_{ik}-l_{k_1}}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_1})} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{(n_{sa}=n-j^{sa}+1)} \binom{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s) \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}+n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j_s-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \left. \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_s-l_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \right) + \\
 & \left(\sum_{k=1}^{(D+l_s+j_{sa}-n-l_{sa})} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{(l_{sa}-k+1)} \right. \\
 & \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{is}+j_s-j_{ik}-l_{k_1}}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{(n_{sa}=n-j^{sa}+1)} \\
 & \left. \frac{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \right)
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{lk} - j_{sa} - l_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n_{sa} - l_{sa} - s)! \cdot (n + j_s - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{D + j_{sa} - n - l_{sa} - s - j^{sa}} \sum_{(j_s=2)}^{(j_s-1)} \\
 & \sum_{i=j_s+l_{ik}-l_s}^{(j_s+l_{ik}-l_s)} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

GÜLDENWA

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^l-1} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=i+l_{ik}-l_s}^{(l_s-k+1)} \sum_{(l_s-k+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{is}+j_s-k-k_1}^{(n_{ik}+j_s-k-k_2)} \sum_{n_{ik}+k_2-j_{ik}+1}^{(n_{sa}=n-j^{sa}+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{i^l}^{(j_s=1)}$$

GÜLDÜZMAYA

$$\begin{aligned}
& \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-i+1)} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j^{sa})!} \\
& \frac{(n_i - 1)!}{(n_i + j^{sa} - n - l_{sa})! \cdot (n - j^{sa})!} \\
& \frac{(l_{sa} + j_{sa}^{ik})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \\
& \left. \frac{(D + j^{sa} - l_{sa} - 1)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{D+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \\
& \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} & \sum_{i=1}^{i-1} \sum_{j_s=1}^{j_{ik} - j_{sa}^{ik} + 1} \sum_{j_{sa}^{ik}=1}^{j_{sa}^{ik} - 1} \sum_{j_{sa}=1}^{j_{sa}^{ik} - 1} \sum_{j_{ik}=j_{sa}^{ik} + l_{ik} - l_{sa}}^{l_s + j_{sa} - k} \sum_{j_{sa}=j_{sa}^{ik} + 1}^{j_{sa}^{ik} - 1} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \\ & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{sa}=n-j_{sa}^{ik}+1}^{(n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \end{aligned}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{(l_{sa} - k + 1)} \sum_{j_{ik}=j^{sa} + l_{sa} - l_s}^{(n_i - j_s + 1)} \sum_{(n_i + k - j_s + 1)}^{(n_i + k - j_s + 1)} \sum_{(n_{is} + j_s - k - k_1)}^{(n_{ik} - j_s - k_2)} \sum_{(n_{ik} + k_2 - j_{ik} + 1)}^{(n_{sa} = n - j^{sa} + 1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{i^l (j_s=1)}^{()}$$

GÜLDENWA

$$\begin{aligned}
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa})} \binom{l_{sa}-i^{l+1}}{j_{ik}} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} + j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n - j^{sa} - n_{sa} - 1)!}{(n - j^{sa})! \cdot (n - j^{sa})!} \cdot \\
& \frac{(n_{ik} - l_{sa} - j_{ik} - 1)!}{(l_{sa} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
& \frac{(D + j^{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-k)} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot
\end{aligned}$$

$$\sum_{k=1}^i \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j)}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{()} \sum_{(n_{sa}=n_{ik}+j_{sa}-j_{sa}-l_{k_2})}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2})!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s - j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2})!} \cdot \frac{(j_s - l_i)!}{(n - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_s \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D - s - n \wedge$$

$$D \geq n < n \wedge l = l_{k_1} + l_{k_2} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, \dots, j_{sa}^s\} \wedge$$

$$s > s \wedge s = s + l_{k_1} \wedge$$

$$l_{k_2}: z = 2, \dots, k = l_{k_1} + l_{k_2} \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
& \sum_{n_{ik}=\mathbf{n}+\mathbf{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbf{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbf{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - 1)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)} \\
& \sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \binom{\quad}{\quad} \\
& \sum_{n_i=\mathbf{n}+\mathbf{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbf{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=\mathbf{n}+\mathbf{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbf{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbf{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{i=1}^{j_{sa}^{ik} - l_{sa}^{ik} + 1} \sum_{j_s=1}^{()}$$

$$\sum_{j_{ik}^{ik} = j_{sa}^{ik} + l_{sa}^{ik} - l_{ik}}^{()}$$

$$\sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{(n_i - j_{ik} - k_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{i^{l-1}} \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{()}$$

GÜLDÜMÜYA

$$\begin{aligned}
& \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2})}^{()} \\
& \frac{(n_i+j_s+j_{sa}-j^{sa}-s-l_{k_1}-l_{k_2}-j_s)!}{(n_i-n-l_{k_1}-l_{k_2})! \cdot (n+j_s-j_{sa}-j^{sa}-j_s)!} \cdot \\
& \frac{(l_s-l_k-1)!}{(j_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(D-l_i)!}{(D+j^{sa}+s-n-l_{k_1}-l_{k_2}-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \\
& \sum_{k=i}^{()} \sum_{(j_s=1)}^{()} \\
& \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()} \\
& \sum_{n_i=n+l_k} \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
& \frac{(n_i+j_s+j_{sa}-j^{sa}-s-l_{k_1}-l_{k_2}-j_{sa}^s)!}{(n_i-n-l_{k_1}-l_{k_2})! \cdot (n+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \\
& \frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}
\end{aligned}$$

$$D \geq n < n+l_s \wedge l_s \leq D-n+1 \wedge$$

$$1-j_s \leq j_{ik}-j_{sa}^{ik}+1 \wedge j_s+j_{sa}^{ik}-1 \leq j_{ik} \leq j^{sa}+j_{sa}^{ik}-j_{sa} \wedge$$

$$j_{ik}+j_{sa}-j_{sa}^{ik} \leq j^{sa} \leq n+j_{sa}-s \wedge$$

$$l_{ik}-j_{sa}^{ik}+1 > l_s \wedge l_{sa}+j_{sa}^{ik}-j_{sa}=l_{ik} \wedge$$

$$l_{ik} \leq D+j_{sa}^{ik}-n \wedge l_i \leq D+s-n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^i \sum_{l_s=2}^{(l_s-k+1)} \sum_{l_{sa}=j_{sa}^{ik}-k}^{l_{sa}+j_{sa}^{ik}-k+1} \sum_{j_{sa}^{ik}-1}^{j_{sa}^{ik}} \sum_{j_{ik}+l_{sa}-l_{ik}}^{j_{ik}} \sum_{n_{is}=n+\mathbb{k}-j_s+1}^n \sum_{n_{ik}=n_{is}+j_{ik}-\mathbb{k}_1}^{n_{is}+j_{ik}-\mathbb{k}_1} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{sa}+j_{sa}^{ik}-i^{l-j_{sa}+1}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n+\mathbb{k}-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_1)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} - j_{sa} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(j_{sa} + j^{sa} - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - j_{ik} - l_s + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(n_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

GÜLDÜZMAYA

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \sum_{k=1}^{(l_s - 1)} \sum_{j_s = j_{ik} - j_{sa} + 1}^{(j_s - 1)}$$

$$\sum_{j_{ik} = j_{sa} + l_{ik} - l_{sa}}^{(j_{ik} - 1)} \sum_{j_{sa} = j_{sa} - l_{ik} + l_{sa}}^{(j_{sa} - 1)}$$

$$\frac{\sum_{n_i = n + l_{ik}}^n \sum_{n_{sa} = n - l_{ik} - j_{sa} - l_{k_2}}^{(n - 1)} \sum_{(n_i + j_s + j_{sa} - j^{sa} - l_{k_1} - l_{k_2})!}}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_{sa} \leq D + j_s - n \wedge$
 $1 \leq j_s \leq j_{ik} - j_{sa}^k + 1 \wedge j_s + j_{sa}^k - 1 \leq j_{ik} - j_{sa} + j_{sa}^k - j_{sa} \wedge$
 $j_{ik} + j_{sa} - j_{sa}^k \leq j_{sa} \leq n + j_{sa} - j_{sa}^k$
 $l_{ik} - j_{sa}^k + j_{sa} \geq l_s \wedge l_s + j_{sa}^k - j_{sa} = l_{ik}$
 $D \geq n < n \wedge I = \dots \geq 0$
 $j_{sa} \leq j_{sa}^k - 1 \wedge j_{sa}^k = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^k - 1 \wedge$
 $s: \{j_{sa}^s, l_{k_1}, j_{sa}^k, l_{k_2}, j_{sa}, \dots, l_{sa}^i\} \wedge$
 $s > j_{sa}^k = s + l_{k_1} \wedge$
 $l_{k_2}: z = 2 \wedge \dots = l_{k_1} + l_{k_2} \Rightarrow$

$$fz S_{j_s, j_{ik}, j_{sa}} = \left(\sum_{k=1}^{l-1} \sum_{(j_s = j_{ik} - j_{sa}^k + 1)}^{(j_s - 1)} \sum_{j_{ik} = j_{sa} + l_{ik} - l_{sa}}^{(j_{ik} - 1)} \sum_{j_{sa} = j_{sa} - l_{ik} + l_{sa}}^{(j_{sa} - 1)} \right)$$

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} + j^{sa} - \mathbf{n} - 1)!}{(n_{sa} - n_{ik} - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(n_{sa} + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{(j_s)} \sum_{i=1}^{(j_s)} \\
& \sum_{j_{ik}=j_{sa}^{ik}}^{(j_s)} \sum_{(j^{sa}=j_{sa})}^{(j_s)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}
\end{aligned}$$

$$\begin{aligned}
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \right) + \\
 & \left(\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(j_{ik} - j_{sa}^{ik})} \right. \\
 & \sum_{j_{ik}=j_{sa}^{sa} + l_{ik} - l_{sa}}^{(l_s + j_{sa} - \dots)} \sum_{(j_s=j_{sa}+2)}^{(n_i - \dots + 1)} \\
 & \dots \\
 & \frac{(n_{is} - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \right) + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s - k + 1)} \\
 & \sum_{j_{ik}=j_{sa}^{sa} + l_{ik} - l_{sa}}^{(l_{sa} - k + 1)} \sum_{(j_{sa}=l_s + j_{sa} - k + 1)}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} + j_{ik} - \mathbf{n} - 1)!}{(n_{sa} + j_{ik} - \mathbf{n} - 1)!} \cdot \\
& \frac{(l_{ik} - j_{sa} - k - 1)!}{(j_{ik} - j_s - n_{sa} - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - j_{sa} - j_{sa}^{ik} + 1)!}{(n_{sa} + j_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=i}^{\binom{D}{i}} \sum_{(j_s=1)}^{\binom{D}{i}} \\
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{sa}-i+1)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}
\end{aligned}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{i=1}^{l-1} \sum_{(j_s=j_{ik}+j_{sa}^{ik}+1)}^{()} \sum_{(l_s=l_{ik})} \sum_{(j_{sa}=j_{sa}+1)}^{()} \sum_{(n_i=n+lk)}^n \sum_{(n_{is}=n+lk-j_s+1)} (n_{is}=n+lk-j_s+1)$$

$$\sum_{(n_{ik}+j_s-j_{sa}-lk_1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-lk_2)}^{()}$$

$$\frac{(n_i + j_s - j_{sa} - j^{sa} - s - lk_1 - lk_2 - j_{sa}^s)!}{(n - lk_1 - lk_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{()} \sum_{i=1}^{()} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()}$$

$$\sum_{n_i=n+lk}^n \sum_{(n_{ik}=n_i-j_{ik}-lk_1+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-lk_2}$$

GÜLDÜMNA

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$= \left(\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \right)$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{j_s} \binom{()}{j_s=1}$$

$$\sum_{j_{sa}=j_{sa}^{ik}}^{j_{sa}} \binom{()}{j_{sa}=j_{sa}^{ik}}$$

$$\sum_{n_i=n+l_{sa}}^n \sum_{n_s=n+l_{sa}+1}^{n+l_{sa}+1} \sum_{n_{sa}=n-j_{sa}+1}^{n+l_{sa}+1} \binom{()}{j_{sa}=j_{sa}^{ik}}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_i - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} +$$

$$\left(\sum_{k=1}^{i^{l-1}} \sum_{j_s=2}^{(j_{ik}-j_{sa}^{ik})} \binom{()}{j_s=2} \right)$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \binom{()}{j_{sa}=j_{ik}+l_{sa}-l_{ik}}$$

$$\sum_{n_i=n+l_{sa}}^n \sum_{n_{is}=n+l_{sa}-j_s+1}^{(n_i-j_s+1)}$$

GÜLDENKYA

$$\begin{aligned}
 & \sum_{n_{ik}=\mathbf{n}+\mathbf{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbf{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbf{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - 1)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)} \\
 & \sum_{n_i=\mathbf{n}+\mathbf{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbf{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=\mathbf{n}+\mathbf{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbf{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbf{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
 \end{aligned}$$

GÜLDÜZMÜŞA

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{j_{ik}=1}^{j_{sa}^{ik} - l_{sa}^{ik} + 1} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=1}^{j_{sa}^{ik} - l_{sa}^{ik} + 1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n+l_k}^{(n_i - j_{ik} - l_{k_1} + 1)} \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

GÜLDÜMÜS

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \sum_{(j^{sa}=j_{sa}^{ik}-l_{k_2})} \\
 & \frac{(n_i+j_s+j_{sa}-j^{sa}-s-l_{k_1}-l_{k_2}-j_s)!}{(n_i-n-l_{k_1}-l_{k_2})! \cdot (n+j_s-j_{sa}-j^{sa}-j_s)!} \cdot \frac{(l_s-l_{k_1}-l_{k_2}-k-1)!}{(l_s-l_{k_1}-l_{k_2}-k+1)! \cdot (j_s-2)!} \\
 & \frac{(D-l_i)!}{(D+j^{sa}+s-n-l_{k_1}-l_{k_2}-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \cdot \sum_{k=1}^l \sum_{(j_s=1)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \\
 & \sum_{n_i=n+l_k} \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i+j_s+j_{sa}-j^{sa}-s-l_{k_1}-l_{k_2}-j_{sa}^s)!}{(n_i-n-l_{k_1}-l_{k_2})! \cdot (n+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \cdot \frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$1 - j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

GÜLDÜMÜYA

$$fz S_{j_s, j_{ik}, j_{sa}} = \binom{i^{l-1} (l_s - k)}{\sum_{k=0}^{i^{l-1} (l_s - k)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=j_s+j_{sa}} \binom{(\dots)}{\sum_{(j_{sa}=j_{ik}+l_{sa}-\dots)}$$

$$\sum_{n_{ik}=n+j_{ik}-j_s+1}^n \binom{(n_i - j_s + 1)}{\sum_{n_{is}=n+\mathbb{k} (n_{is}-j_s+1)}$$

$$\sum_{n_{ik}=n+j_{ik}-j_s+1}^{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2} \binom{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}{\sum_{(n_{sa}=n-j_{sa}+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\sum_{k=0}^{i^l} \sum_{(j_s=1)}^{(\dots)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \left(\frac{(D + j_{sa} - n - l_{sa})!}{(D + j_{sa} - n - l_{sa})! \cdot (s)!} \right) + \\
 & \left(\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{()} \right) \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}}^{(n_{ik}-k+1)} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
 \end{aligned}$$

GÜLDÜZYA

$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=1)}^{()} \\
 & \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{l_{ik}-l_s+1} \sum_{(j_s=1)}^{()} \\
 & \sum_{(n_i-n_{ik}-1)}^{(n_i-n_{ik}-1)} \sum_{j_{sa}^{ik}=j_{sa}^{ik}-k_2}^{j_{sa}^{ik}-k_2} \\
 & \sum_{n_i=n+k}^{n+k} \sum_{(n_i=n+k_2-j_s+1)}^{(n_i=n+k_2-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{sa}=n-j^{sa}+1} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \sum_{k=i}^n \sum_{j_s=1}^{(n-k)} \sum_{j_{ik}=j_{sa}^{ik} (j^{sa}=j_{sa})} \sum_{n_i=n+1}^n \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s - j_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - j_{sa} < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$j_{sa} \geq n - l_s \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$f_z \mathcal{S}_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{\substack{(\quad) \\ (j_s=j_{ik}-j_{sa}^{ik}+1)}} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{(\quad) \\ (j^{sa}=l_{sa}+n-D)}} \sum_{n_i=n}^n \sum_{\substack{(\quad) \\ (n_i=n+1-j_s+1)}} \sum_{n_{is}+j_s-j_{ik}} \sum_{\substack{(\quad) \\ (n_{ik}+j_{ik}-j^{sa})}} \sum_{i_{ik}+1} \sum_{\substack{(\quad) \\ (=n-j^{sa}+1)}} \frac{(n_i - n_{is})}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{\substack{(\quad) \\ (j_s=2)}} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{(\quad) \\ (j^{sa}=l_{sa}+n-D)}} \sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(\quad) \\ (n_{is}=n+\mathbb{k}-j_s+1)}} \right)$$

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$$\begin{aligned}
& \sum_{n_{ik}=\mathbf{n}+\mathbf{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbf{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbf{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - 1)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-\mathbf{n}-l_{sa}} \sum_{(j_s=2)}^{(l_s-k+1)} \\
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa}-k+1)} \sum_{(j^{sa}=l_s+j_{sa}-k+1)} \\
& \sum_{n_i=\mathbf{n}+\mathbf{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbf{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=\mathbf{n}+\mathbf{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbf{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbf{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa})!} + \\
& \sum_{k=0}^{l_s - l_s + j_{sa} - 1} \sum_{i_s=2}^{(l_s - k + 1)} \sum_{j_{ik}^{sa} + l_{ik} - l_{sa}}^{(l_{sa} - k + 1)} \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
\end{aligned}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}$$

$$(l_{sa} - i_{l+1})$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D)}$$

$$\sum_{n_i=n+l_k}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{(n_{ik}=n+l_{k_2}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_{sa}=n-j_{sa}+1}$$

$$(n_i - n_{ik} - 1)!$$

$$(j_{ik} - l_{k_1} - n_{sa} - j_{ik} + 1)!$$

$$(n_{ik} - n_{sa} - 1)!$$

$$(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!$$

$$(n_{sa} - 1)!$$

$$(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!$$

$$(l_{ik} - j_{ik} - l_s - j_{sa}^{ik} + 1)!$$

$$(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!$$

$$(D + j_{sa} - l_{sa} - s)!$$

$$(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)! -$$

$$D+l_s+s-n-l_i$$

$$\sum_{k=1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$(l_s + j_{sa} - k)$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}$$

$$\sum_{n_i=n+l_k}^{n} \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()}$$

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$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$

$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$

$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$

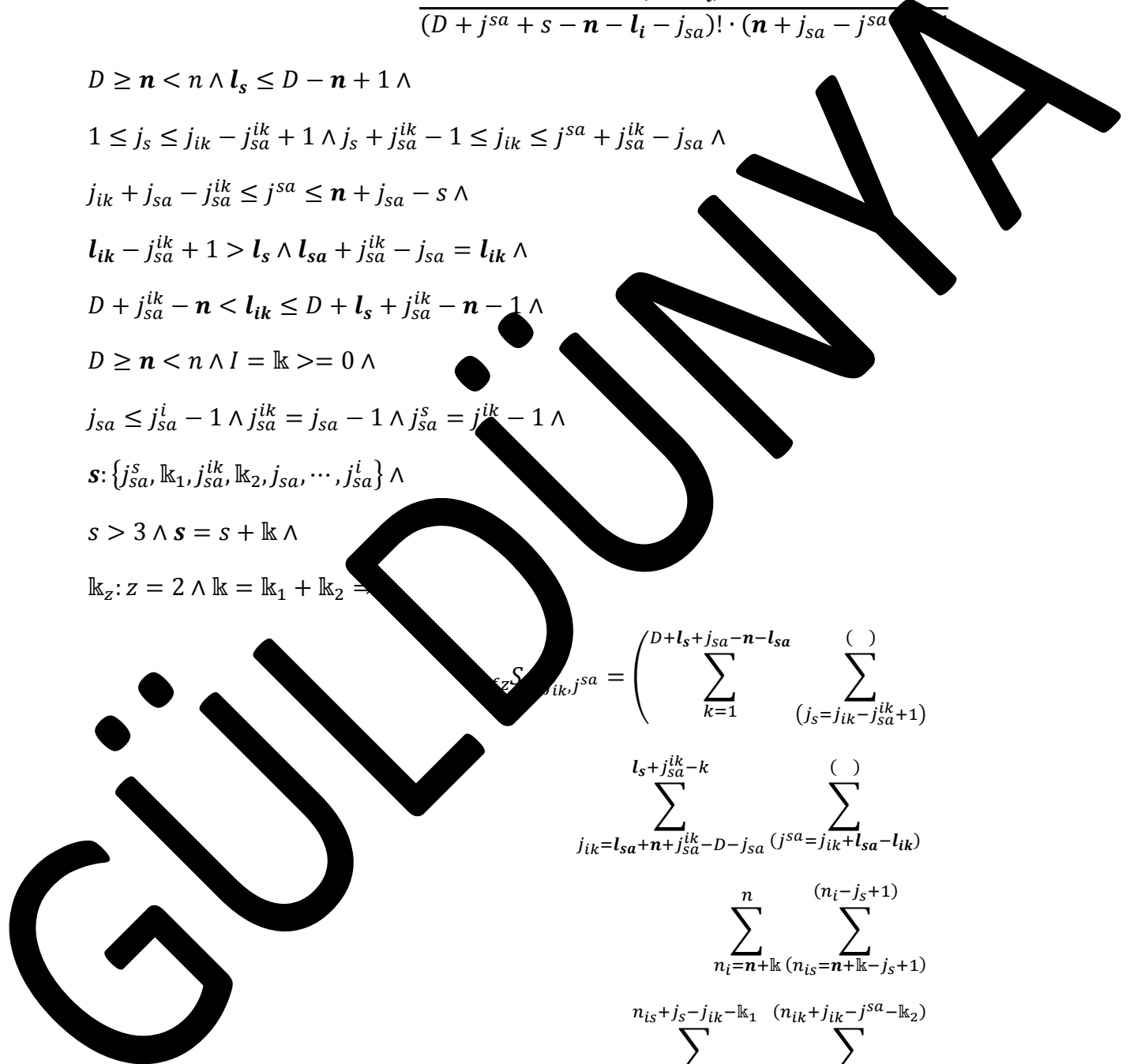
$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 3 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$



$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa})!} + \\
& \sum_{j_s=2}^{(D+l_s+n-l_{sa})(j_{ik}-j_{sa})} \sum_{j_{ik}=l_{sa}+n+j_s-D-j_{sa}}^{j_{sa}-k} (j^{sa}=j_{ik}+l_{sa}-l_{ik}) \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$

$$\begin{aligned}
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j_s=2)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=l_{sa}+j_{sa}^{ik}-k-1}^{(n_{ik}+j_{sa}^{ik}-k-j_{sa}+1)} \sum_{(j_s=2)}^{(n_{ik}+j_{sa}^{ik}-k-j_{sa}+1)} \\
 & \sum_{n_{ik}=l_{sa}+j_{sa}^{ik}-k-1}^{(n_{ik}+j_{sa}^{ik}-k-j_{sa}+1)} \sum_{(j_s=2)}^{(n_{ik}+j_{sa}^{ik}-k-j_{sa}+1)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)}
 \end{aligned}$$

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$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \binom{(\quad)}{\quad} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_{sa}}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-2)! \cdot (n_{is}+j_{sa}-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} +$$

$$\sum_{k=i}^{\binom{(\quad)}{\quad}} \sum_{l \binom{(\quad)}{\quad}}$$

$$\sum_{n_i=n+k}^n \sum_{n_{ik}=n+k_2-j_{ik}+1}^{(n_i-j_{ik}-k_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-k_2} \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!}$$

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$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa}^{ik} - s)!} \cdot \\
& \sum_{k=0}^{D+l_s+s} \binom{D+l_s+s-k}{k} \binom{n}{j_s=j_{ik}-j_{sa}^{ik}} \\
& \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{n_i-j_s+1} \binom{n_i-j_s+1}{n_{is}=n+k-j_s+1} \\
& \sum_{k_1=0}^{j_{ik}-j_s-j_{sa}^{ik}-k} \sum_{k_2=0}^{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2} \binom{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}{k_2} \\
& \frac{(n_i - n - k_1 - k_2)! \cdot (j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D > n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j_{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{(j_{ik}=j_s+1)}^{(j_{sa}=j_{ik}+l_{sa})} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}+j_s-j_{ik})}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{(n_{ik}=n-j_{ik}+1)}^{(n_{sa}=n-j_{sa}+1)} \frac{(n_i - n_{is} - 1)!}{(n_{sa} - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \right) + \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \right)$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \binom{\quad}{\quad} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)!(n_{is}+j_{sa}-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_s-n-1)!(n-j^{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)!(j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)!(j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})!(n+j_{sa}-j^{sa}-s)!} + \\
 & \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \\
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \binom{\quad}{\quad} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{\binom{l_s - k - 1}{l_s - j_s - k + 1}}{(l_s - j_s - k + 1)! \cdot (l_s - j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_s - 1)! \cdot (j_{ik} - j_s - j_{sa} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=0}^{i-1} \sum_{j_s=2}^{l_s-k+1} \sum_{j_{ik}=l_{sa}+n+j_{sa}-D-j_{sa}}^{l_{sa}+j_{sa}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{\binom{l_s-k+1}{j_s=2}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{(j_s)} \sum_{(j_s=1)}^{(j_s)} \\
 & \sum_{j_{ik}=l_{sa}+j_{sa}^{ik}-i-1}^{(j_{ik}-D-j_{sa})} \sum_{(j_{ik}+l_{sa}-l_{ik})}^{(j_{ik}+l_{sa}-l_{ik})} \\
 & \sum_{(n_i-n_{ik}-1)}^{(n_i-n_{ik}-1)} \sum_{(n_i-n_{ik}-1)}^{(n_i-n_{ik}-1)} \\
 & \sum_{n_i=n+l_k}^{(n_i=n+l_k)} \sum_{(n_i=n+l_k-j_s+1)}^{(n_i=n+l_k-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{sa}=n-j^{sa}+1)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(j_{ik}=j_s+j_{sa}^{ik}-1)} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - j_{sa}^s + 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^l\}$$

$$s > 3 \wedge s = s + 1 \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + 1 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})}^{(l_s+j_{sa}-k)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j^{sa} - n - 1)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{j_{ik}=1}^{(D+l_s+j_{sa}-j_{ik}-j_{sa})} \sum_{(j_s=2)}^{(n-j_{sa})} \sum_{(j_s=2)}^{(l_s+j_{sa}-k)} \\
 & \sum_{j_{ik}=1}^{(l_{sa}-l_{sa})} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa})}^{(n-j_s+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_s-k+1)} \\
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{sa}-j_{sa}^{ik}+1)} \sum_{(j_{sa}=j_{sa}^{ik}+1)}^{(n_i-j_s+1)} \\
& \sum_{(n_i+k)(n_i+k-j_s+1)}^{(n_i+j_{sa}-k-k_1)} \sum_{(n_{ik}+j_{sa}-k-k_2)}^{(n_{ik}+j_{sa}-k-k_2)} \\
& \sum_{(n_{ik}+k-k_2-j_{ik}+1)}^{(n_{sa}=n-j^{sa}+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i-1} \sum_{(j_s=2)}^{(l_s-k+1)}
\end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1) \\ (j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})}} \\
 & \sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+k-j_{ik})}} \\
 & \sum_{\substack{n_{is}+j_s-j_{ik}-k_1 \\ n_{ik}=n+k_2-j_{ik}+1}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n-j^{sa}+1)}} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_{ik}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{sa}+j_s-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j_s-n-1)! \cdot (n-j^{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} + \\
 & \sum_{k=i}^{\binom{()}{}} \sum_{l \binom{()}{j_s=1}} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{\substack{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1) \\ (j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})}} \\
 & \sum_{n_i=n+k}^n \sum_{\substack{(n_i-j_{ik}-k_1+1) \\ (n_{ik}=n+k_2-j_{ik}+1)}} \sum_{\substack{(n_{ik}+j_{ik}-j^{sa}-k_2) \\ (n_{sa}=n-j^{sa}+1)}} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!}
 \end{aligned}$$

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$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa}^{ik} - s)!} \cdot \sum_{k=0}^{D+l_s+s} \binom{D+l_s+s-k}{j_s=j_{ik}-j_{sa}^{ik}} \binom{j_{sa}-k}{j_{sa}=l_i+n+j_{sa}-D-s} \sum_{n_i=n+k}^{n_i=n+k} \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \frac{(n_i - n_{i-1} - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(l_s - k - 1)! \cdot (l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D > l_s \wedge n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

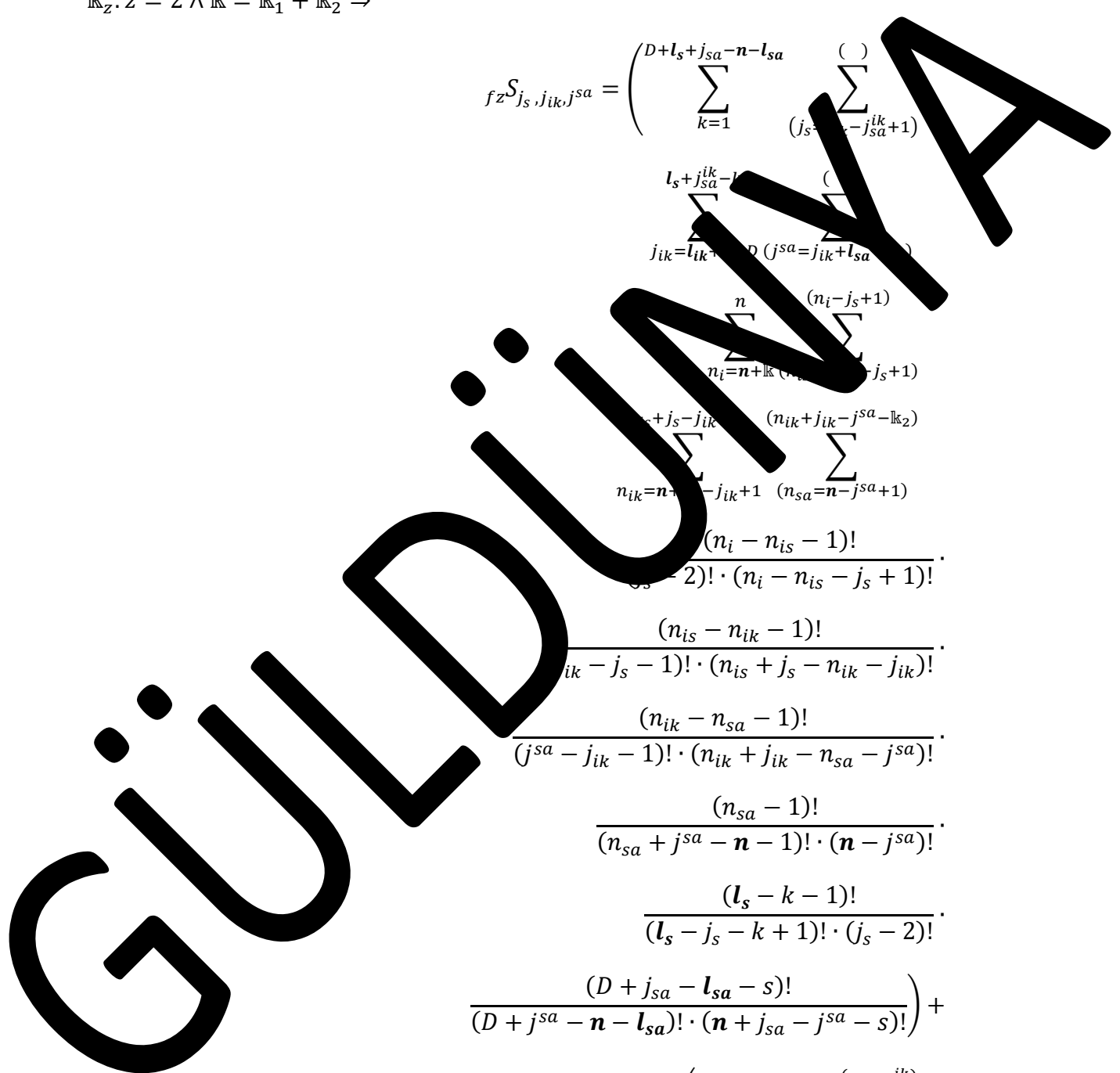
$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{()}{(j_s - k - j_{sa}^{ik} + 1)} \sum_{j_{ik} = l_{ik} + \dots}^{l_s + j_{sa}^{ik} - l_{sa}} \binom{()}{(j^{sa} = j_{ik} + l_{sa} - 1)} \sum_{n_{ik} = n + \dots}^n \binom{(n_i - j_s + 1)}{(n_i - n_{ik} - 1)} \sum_{n_{is} = n + \dots}^{n_{is} - 2} \binom{(n_i - j_s + 1)}{(n_i - n_{is} - j_s + 1)} \sum_{n_{ik} = n + \dots}^{n_{ik} + j_s - j_{ik}} \binom{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}{(n_{sa} = n - j^{sa} + 1)} \frac{(n_i - n_{is} - 1)!}{(n_{is} - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik})} \right)$$



$$\begin{aligned}
& \sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-k} \binom{(\quad)}{j_{sa}=j_{ik}+l_{sa}-l_{ik}} \\
& \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \\
& \frac{\binom{n_i-1}{j_s-2} \binom{n_i-n_{is}-1}{n_i-n_{is}+1}}{\binom{n_{is}-n_{ik}-1}{(j_{ik}-j_s-n_{is}+n_{ik}-j_{ik})}} \\
& \frac{\binom{n_{ik}-n_{sa}-1}{(j_{sa}-j_{ik}-1) \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})}}{\binom{n_{sa}-1}{(n_{sa}+j_{sa}-n-1) \cdot (n-j_{sa})}} \\
& \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
& \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{sa}-j_{ik}-1)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
& \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} + \\
& \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_s-k+1)} \\
& \sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{ik}-k+1} \binom{(\quad)}{j_{sa}=j_{ik}+l_{sa}-l_{ik}} \\
& \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}+j_{ik}-j_{sa}-k_2)}
\end{aligned}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{\binom{l_s - k - 1}{l_s - j_s - k + 1}}{(l_s - j_s - k + 1)! \cdot (l_s - j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_s + 1)!}{(j_s + l_{ik} - j_s - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_s - l_{sa} - s)!}{(D + j^{sa} - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{l-1} \sum_{j_s=2}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\cdot)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{l_{ik}-n+D} \binom{()}{j_s=1} \\
 & \sum_{l_{ik}=n+D}^{l_{ik}-n+1} \binom{()}{j_s=j_{ik}+l_{sa}-l_{ik}} \\
 & \sum_{n_i=n+l_{ik}}^{n+l_{ik}-l_{ik}+1} \sum_{n_{sa}=n+l_{ik}-j_s+1}^{n+l_{ik}-j_s+1} \sum_{n_{sa}=n-j^{sa}+1}^{n-j^{sa}-l_{k_2}} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \binom{()}{j_s=j_{ik}-j_{sa}^{ik}+1} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}} \\
 & \sum_{n_i=n+l_{ik}}^n \binom{(n_i-j_s+1)}{(n_{is}=n+l_{ik}-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \dots)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - \dots - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge$

$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$

$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$

$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - \dots \wedge j_{sa}^s = j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\}$

$s > 3 \wedge s = s + \dots \wedge$

$\mathbb{k}_z: z = 2 \wedge \dots = \mathbb{k}_1 + \dots \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}} = \binom{D+l_s+j_{sa}-n-l_{sa}}{\sum_{k=1}^{(l_s-k+1)}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j^{sa} - n - 1)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \sum_{i=1}^{(D+l_s+j_s-1-l_{sa})} \sum_{k=l_{ik}+n-D-j_{sa}^{ik}+1}^{(D+l_s+j_s-1-l_{sa})} \sum_{k=j_s+j_{sa}^{ik}}^{n-k+1} \binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_{ik}+n-D-j_s^{ik})} \frac{(l_{ik}-k+1)!}{(j_{ik}=l_{ij}+n-D) \cdot (n_{ik}+k-l_{ik})} \cdot \frac{(n_i - j_s + 1)!}{(n_{i+k} - n_{i+k} - j_s + 1)!} \cdot \frac{(n_{i_s} + j_s - k - k_1)!}{(n_{ik} - k_1 - a - k_2)!} \cdot \frac{(n_{ik} + k_2 - j_{ik} + 1)!}{(n_{sa} = n - j^{sa} + 1)!} \cdot \frac{(n_i - n_{i_s} - 1)!}{(j_s - 1)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{i_s} + j_s - n_{i_k} - j_{ik})!} \cdot \frac{(n_{i_k} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{i_k} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i-1} \sum_{(j_s=2)}^{(l_s-k+1)}$$

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$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_i - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s + 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=i}^{()} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

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$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa}^{ik} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+s-n} \sum_{j_s=l_i+n-D-s}^{(l_s-k)} \sum_{j_{ik}=j_{sa}^{ik}-1}^{(j_{sa}^{ik}-1)} \sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{n_{is}=n+k-j_s+1}^{(n_{is}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \\
& \frac{(n_i - n_{is} - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n_{is} - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D > n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i^{l-1}} \sum_{\substack{j_s = \dots \\ (j_s = \dots + l_s - l_{ik}) \\ (l_s = k+1)}}^{(\quad)} \sum_{\substack{j_{ik} = \dots \\ (j_{ik} = \dots - l_{sa} - j_{sa} - 1)}}^{(\quad)} \sum_{\substack{n \\ n_i = n + \mathbb{k}_1}}^{(n_i - j_s + 1)} \sum_{\substack{n_{is} + j_s - j_{ik} \\ n_{ik} = n - j_{ik} + 1}}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \sum_{\substack{n_{sa} = n - j^{sa} + 1}}^{(n_{sa} = n - j^{sa} + 1)} \frac{(n_i - n_{is} - 1)!}{(n_i - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{(\quad)} \sum_{j_s=1}^{(\quad)}$$

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$$\begin{aligned}
& \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{(\cdot)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} + j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_i + j^{sa} - n - 1)!}{(n_i + j^{sa} - n - 1)! \cdot (n - j^{sa} - 1)!} \cdot \\
& \frac{(D + j^{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa} - s)!} - \\
& \sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \\
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{sa}-k+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\cdot)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{l-1} \sum_{i=1}^{(j_s=1)}^{(\cdot)}
\end{aligned}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(D - l_i)}{(D + s - l_i)! (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + \dots \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} > l_{sa}$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} \wedge j_{sa}^s = j_{sa}^{ik} \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k}_1$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k}_1 = \mathbb{k}_1 + \mathbb{k}_2$$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{sa}-k+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{is}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (l_s - 2)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=l}^{(\cdot)} \sum_{j_s=1}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{j^{sa}=j_{sa}}^{(\cdot)}$$

$$\sum_{i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{sa}-k+1)}^{(n_i-j_s+1)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_s-j_{sa}-k_2)}^{(n_i-j_s+1)} \frac{(n_i+j_s+j_{sa}-j^{sa}-s-k_1-k_2-j_s)!}{(n_i-n-k_1-k_2)! \cdot (n+j_s-j_{sa}-j^{sa}-s-k_1-k_2-j_s)!} \cdot \frac{(l_{sa}-k-1)!}{(j_s-k-1)! \cdot (j_s-2)!} \cdot \frac{(D+l_i)!}{(D+j^{sa}+s-n+l_i-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j_{sa}^{sa} + j_{sa}^{ik} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n - j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge k = k_1 + k_2 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} - j_{sa} - 1 \leq j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, j_{sa}^{ik}, k_2, j_{sa}^i, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = k_1 + k_2 \wedge$$

$$k_1 = k_2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{ik}+j_{sa}-k-j_{sa}+1)}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} + j^{sa} - n - 1)!}{(n_{sa} - n_{ik} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_i - n_{ik} - k - 1)!}{(n_i - j_s - n_{ik} - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(n_i + j^{sa} - n - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=l}^{()} \sum_{(j_s=1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{(j^{sa}=j_{sa})}^{()} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}
 \end{aligned}$$

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$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik})}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_k+1)}^{(n_{is}+1)}$$

$$\sum_{n_{is}+j_s-l_{k_1}}^{()} \sum_{(n_{sa}=j^{sa}-l_{k_2})}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=i}^l \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

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$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} \sum_{j_s, j_{ik}}^{l-1} &= \sum_{k=1}^{l-1} \binom{()}{(j_s=j_{ik}+l_s-l_{ik})} \\ &\quad \binom{()}{(j_{sa}-k-j_{sa}^{ik}+1)} \\ &\quad \sum_{(j_{sa}=j_{sa}+1)} \\ &\quad \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\ &\quad \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \\ &\quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ &\quad \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\ &\quad \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\ &\quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \\ &\quad \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \end{aligned}$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{()} \sum_{j_s=1}^{()} \\
& \sum_{j_{ik}=j_s}^{()} \sum_{j^{sa}=j_{sa}}^{()} \\
& \sum_{n_i=n+l_k}^n \sum_{n_{ik}=n+l_k}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n+l_k}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
& \frac{(n_i - l_{k_1} - 1)!}{(n_i - l_{k_1} - j_{ik} + 1)!} \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_i + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} - \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{()} \\
& \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{j^{sa}=l_i+n+j_{sa}-D-s}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)} \\
& \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}^{()} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{ik}-l_i)}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{j_s} \binom{()}{j_s=1} \sum_{j_{sa}=j_{sa}^{ik}} \binom{()}{j_{sa}=j_{sa}^{ik}} \sum_{n_i=n+l_{ik}}^{n+l_{ik}-j_{ik}+1} \sum_{n_{sa}=n+l_{ik}-j_{sa}+1}^{n+l_{ik}-j_{sa}-l_{k2}+1} \binom{()}{j_{sa}=j_{sa}^{ik}}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{sa} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!}$$

$$\sum_{k=1}^{i^{l-1}} \binom{()}{j_s=j_{ik}+l_s-l_{ik}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \binom{()}{j_{sa}=j_{ik}+l_{ik}-l_i}$$

$$\sum_{n_i=n+l_{ik}}^n \binom{()}{n_i=n+l_{ik}-j_s+1}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k1}} \binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k2}}$$

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$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\sum_{k=1}^{(j_s)} (j_s=1)$$

$$\sum_{j_{sa}^{ik} (j^{sa}=j_{sa})}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{j_{ik}=\mathbb{k}_1}^n \sum_{j_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_s + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} - j_{sa} \leq n - j_{sa} - s$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge j_{sa}^{ik} + j_{sa} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$+ s - 1 < l_i \leq D + 1 + s - n - 1 \wedge$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$j_{sa} \in \{j_{sa}^s, \mathbb{k}_1, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{ik})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - j_s + 1)!}$$

$$\frac{(n_{is} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{(j^{sa}=j_{sa})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - j_{sa} - s)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{sa}-l_{ik})}^{()} \sum_{j_{ik}+1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{j_{sa}=j_{ik}+l_{sa}-l_{ik}}^{()} \sum_{(n_{is}=n+k-j_s+1)}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \frac{(n_i + j_{sa} - j_{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(n + j_{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - j_{sa} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

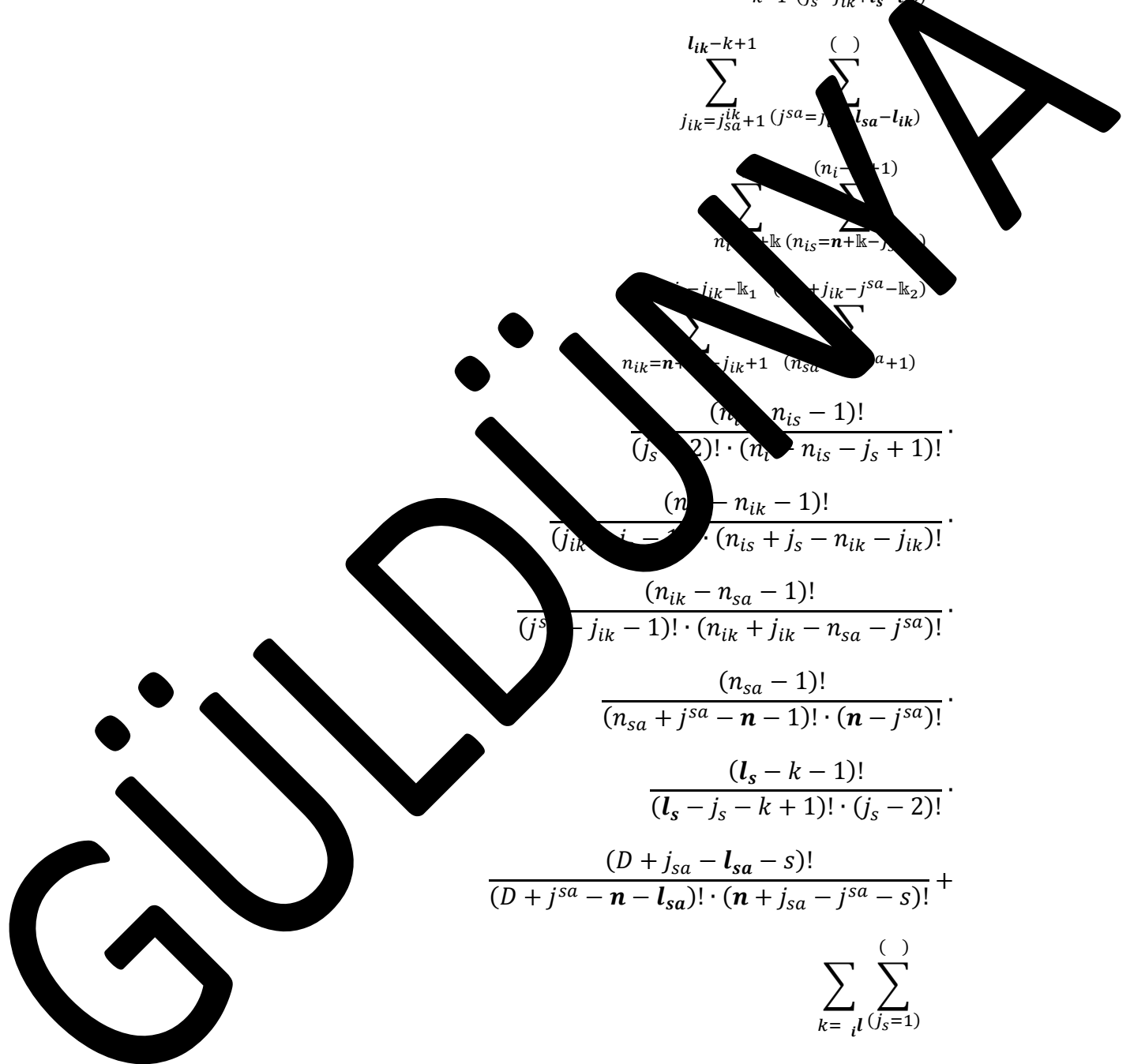
$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i-1} \sum_{\substack{(\cdot) \\ (j_s = j_{ik} + l_s - l_{ik})}} \\ \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik} - k + 1} \sum_{\substack{(\cdot) \\ (j^{sa} = j_{sa} - l_{ik})}} \\ \frac{(n_{i-1} - j_{ik} + 1)!}{n_{i-1} + \mathbb{k} (n_{is} = n + \mathbb{k} - j_{ik})} \cdot \frac{(n_{i-1} - j_{ik} - \mathbb{k}_1 - 1)! \cdot (n_{i-1} + j_{ik} - j^{sa} - \mathbb{k}_2)!}{n_{ik} = n + j_{ik} + 1 (n_{sa} = n - j_{sa} + 1)} \\ \frac{(n_{is} - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - i - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \\ \frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \\ \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\ \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\ \sum_{k=i}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)} \\ \sum_{j_{ik} = j_{sa}^{ik}}^{(\cdot)} \sum_{(j^{sa} = j_{sa})}^{(\cdot)}$$



$$\begin{aligned}
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{\substack{(n_i - j_{ik} - \mathbb{k}_1 + 1) \\ (n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}} \sum_{\substack{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2 \\ n_{sa} = n - j^{sa} + 1}} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j_{sa} - l_{sa})! \cdot (n - l_{sa})!} \cdot \\
 & \sum_{k=1}^{i^l} \sum_{\substack{(\quad) \\ (j_s = l_s - l_{ik})}} \\
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik} - k} \sum_{\substack{(\quad) \\ (j^{sa} = j_{ik} + l_{sa} - l_{ik})}} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{\substack{(\quad) \\ (n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{(\quad)} \sum_{\substack{(\quad) \\ (j_s = 1)}} \\
 & \sum_{j_{ik} = j_{sa}^{ik}} \sum_{\substack{(\quad) \\ (j^{sa} = j_{sa})}}
 \end{aligned}$$

GÜLDÜNKAYA

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(\cdot)}{n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1}} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - j_{sa}^{ik} \geq l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i^{l-1}} \sum_{\binom{(\cdot)}{j_s=j_{ik}+l_s-l_{ik}}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{\binom{(\cdot)}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(n_i-j_s+1)}{n_{is}=n+\mathbb{k}-j_s+1}}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}{n_{sa}=n-j^{sa}+1}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa} - s)!} + \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_s=1)}^{()} \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()} \\
 & \sum_{n_i=n+l_k}^{(n_i-j_{ik}+1)} \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}
 \end{aligned}$$

GÜLDÜMNA

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - j_{sa}^s)!}{(l_s - j_s - \mathbb{k}_1 - 1)! \cdot (l_s - j_s - \mathbb{k}_2 - 2)!}$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} - j_{sa}^{ik} - j_{sa}^s$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^s = l_{ik} \wedge n + j_{sa} - s > l_i \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_s = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1$$

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_s - \mathbb{k}_2, j_{sa}, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + 1$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i^l-1} \sum_{(j_s=2)}^{(l_{sa}-k-j_{sa}+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j^{sa})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - 1)!}{(D + j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (D + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=l}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)} \\
& \sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{(j^{sa}=j_{sa})}^{(\cdot)} \\
& \sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} -
\end{aligned}$$

$$\begin{aligned}
& \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{sa}-k-j_{sa}+2)} \\
& \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(j_{sa}=j_{ik}+l_{sa}-l_s)} \sum_{(j_s=1)}^{(n_i-j_s+1)} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{(n_{is}=n_{ik}+j_{ik}-j_{sa}-l_{k_1})} \sum_{(j_s=1)}^{(n_i-j_s+1)} \\
& \frac{(n_i + j_s + j_{sa} - l_{k_1} - l_{k_2} - j_{sa})!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n_i + j_s + j_{sa} - j_{sa} - l_{k_1} - l_{k_2} - j_{sa})!} \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - l_{k_1} - l_{k_2} + 1)! \cdot (j_s - 2)!} \\
& \frac{(D - l_i)!}{(D + s - n - l_i - j_{sa} - l_{k_1} - l_{k_2} - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \\
& \sum_{k=1}^{(l)} \sum_{(j_s=1)}^{(l)} \\
& \sum_{j_{ik}=j_{sa}^{ik}}^{(j_{sa}=j_{sa})} \\
& \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{(n_i-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2}}^{(n_i-j_s+1)} \\
& \frac{(n_i + j_s + j_{sa} - j_{sa} - s - l_{k_1} - l_{k_2} - j_{sa})!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j_{sa} - s - j_{sa})!} \\
& \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S j_s j_{ik} j_{sa} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_{sa}-k+2)} \sum_{j_{ik}=j_s+1}^{n-l_s} \sum_{(j_{sa}=j_{ik}+l_{sa}-l_{ik})}^{(n-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\begin{aligned}
 & \sum_{k=1}^n \sum_{i=1}^{(n-k)} \binom{n-k}{j_s=1} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{j^{sa}=j} \binom{n-k}{j^{sa}=j} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\
 & \frac{(n_i - k_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} - j_{sa} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} - j_{sa} - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - j_{sa} - s)!}{(D + j_{sa} + s - n - l_{sa})! \cdot (n - s)!} \cdot \\
 & \sum_{k=1}^{D+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{sa}-k-j_{sa}+2)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \binom{n}{j^{sa}=j_{ik}+l_{sa}-l_{ik}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \binom{n}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$

GÜLDÜZMAYA

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz = \sum_{k=2}^{i-1} (l_{ik} - j_{sa}^{ik}) \sum_{(j_s=2)}^{j_{sa}^{ik}+2}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{n} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{n_i-j_s+1}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\begin{aligned}
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i-1} \sum_{(j_s=1)}^{()} \\
& \sum_{j_{ik}=j_s}^{()} \sum_{(j^{sa}=j_{sa})}^{()} \\
& \sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_1)}^{(n_i-j_{ik}-k_1+1)} \sum_{(n_{sa}=n+k_2)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
& \frac{(n_i - k_1 - 1)!}{(n_i - k_1 - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_i + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} - \\
& \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \\
& \sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \sum_{k=1}^{()} \sum_{j_s=1}^{()} \sum_{j_{ik}=j_s}^{()} \sum_{j_{sa}=j_{sa}}^{()} \sum_{n_i=n+l_k}^n \sum_{n_{ik}=n_i-j_{ik}-l_{k1}}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}}^{()} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k1} - l_{k2} - j_{sa}^s)!}{(n_i - n - l_{k1} - l_{k2})! \cdot (j_s - j_{sa} - j^{sa} - s - j_{sa}^s)!} \frac{(D - l_i)!}{(D + j_s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik}^{ik} - j_{sa}^{ik} < j_{ik} \leq j_s + j_{sa}^{ik} - j_{sa}^{ik} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n - j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} = l_{ik} \wedge l_{sa} + j_{sa} - s > l_{sa} \wedge$

$D + s - n < l_i \leq D + l_s + s - n - l_i \wedge$

$D > n < n \wedge l_s = l_k \geq 1 \wedge$

$j_{sa}^{ik} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^{ik} - 1 \wedge$

$s \in \{j_{sa}^s, l_{sa}^{ik}, l_{sa}^{ik}, l_{k2}, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 3 \wedge s = j_{sa} - l_k \wedge$

$l_{k2} = 2 \wedge l_k = l_{k1} + l_{k2} \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i-1} \sum_{j_s=2}^{(l_{ik}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{j_{sa}=j_{ik}+l_{sa}-l_{ik}}^{()}$$

$$\begin{aligned}
 & \sum_{n_i = n + k}^n \sum_{n_{is} = n + k - j_s + 1}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{n_{sa} = n - j^{sa} + 1}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} + j^{sa} - n - 1)!}{(n_{sa} - n_{ik} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(n - j_s - n_{ik} - 1)! \cdot (j_s - 2)!}{(D + j_{sa} - l_{sa} - s)!} + \\
 & \sum_{k=1}^n \sum_{l=1}^{(j_s)} \\
 & \sum_{j_{ik} = j_{sa}^{ik}}^{(n_i - j_{ik} - k_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2} \\
 & \sum_{n_i = n + k}^n \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{(n_i - j_{ik} - k_1 + 1)} \sum_{n_{sa} = n - j^{sa} + 1}^{n_{ik} + j_{ik} - j^{sa} - k_2} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(j_{sa}=l_{sa}-l_{ik})}$$

$$\sum_{n+kk}^n \sum_{(n_{is}=n+kk+1)}^{(n_{is}+1)}$$

$$\sum_{n=n_{is}+j_s-k_1}^{(j_{sa}-k_2)}$$

$$\frac{(n_i + j_s + j_{sa} - s - k_1 - k_2 - j_{sa})!}{(n_i - n - k_1 - k_2)! \cdot (n_i + j_s + j_{sa} - j_{sa} - s - j_{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(n - l_i)!}{(D + j_{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{sa} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - j_{sa}^{ik}$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D > n < n \wedge I = k \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$j_{sa} \in \{1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa} (l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)}$$

$$\sum_{(j_{sa}=j_{sa}+1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n-k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{is}-k_1-k_2)}$$

$$\frac{(n_{is}-j_s-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!}$$

$$\frac{(n_{is}-j_s-k-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}) (n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!}$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j_{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2)}^{(l_{sa}-k+1)}$$

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_s}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{i_k}=n+l_{k_2}-j_{i_k}+1}^{n_{i_s}+j_s-j_{i_k}-l_{k_1}} \sum_{(n_{s_a}=n-j^{s_a}+1)}^{(n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2})} \\
 & \frac{(n_i - n_{i_s} - 1)!}{(j_s - 2)! \cdot (n_i - n_{i_s} - j_s + 1)!} \cdot \\
 & \frac{(n_{i_s} - n_{i_k} - 1)!}{(j_{i_k} - j_s - 1)! \cdot (n_{i_s} - n_{i_k} - j_{i_k})!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a})!} \cdot \\
 & \frac{(n_{s_a} + j^{s_a} - n - 1)!}{(n_{s_a} - n - 1)! \cdot (j^{s_a} - 1)!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(n_{i_k} - n_{s_a} - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{s_a} + j_{s_a}^{i_k} - l_{i_k} - j_{s_a})!}{(j_{i_k} - l_{s_a} - j_{s_a}^{i_k} - l_{i_k} - j_{s_a})! \cdot (j^{s_a} + j_{s_a}^{i_k} - j_{i_k} - j_{s_a})!} \cdot \\
 & \frac{(D + j_{s_a} - l_{s_a} - s)!}{(D + j_{s_a} - n - l_{s_a})! \cdot (n + j_{s_a} - j^{s_a} - s)!} + \\
 & \sum_{k=i}^{\binom{)}{}} \sum_{l \binom{)}{j_s=1}} \\
 & \sum_{j_{i_k}=j_{s_a}^{i_k}}^{(l_{s_a} - i^{l+1})} \sum_{(j^{s_a}=j_{s_a})} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{i_k}=n+l_{k_2}-j_{i_k}+1)}^{(n_i-j_{i_k}-l_{k_1}+1)} \sum_{n_{s_a}=n-j^{s_a}+1}^{n_{i_k}+j_{i_k}-j^{s_a}-l_{k_2}} \\
 & \frac{(n_i - n_{i_k} - 1)!}{(j_{i_k} - 2)! \cdot (n_i - n_{i_k} - j_{i_k} + 1)!} \cdot \\
 & \frac{(n_{i_k} - n_{s_a} - 1)!}{(j^{s_a} - j_{i_k} - 1)! \cdot (n_{i_k} + j_{i_k} - n_{s_a} - j^{s_a})!}
 \end{aligned}$$

GÜLDENSA

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - l_{sa})!} \cdot$$

$$\sum_{j_s=1}^{i^{l-1}} \binom{()}{j_s=j_{ik}+j_s-l_{ik}}$$

$$(l_{ik} + j_{sa} - l_{sa} + 1)$$

$$\sum_{j_{ik}=j_{sa}} \sum_{j_{sa}=j_{sa}+1}$$

$$\sum_{n_i=0}^n \binom{()}{n_i=n+l_k-j_s+1}$$

$$n_i = n + l_k - j_s + 1$$

$$\sum_{n_{ik}=n_i+j_s-l_{k_1}} \binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!} \cdot$$

$$\sum_{k=1}^{()}{l} \sum_{j_s=1}^{()}{l}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{j_{sa}^{sa}=j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \binom{()}{n_{ik}=n_i-j_{ik}-l_{k_1}+1} n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}$$

GÜLDÜMNYA

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik} - k + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(l_{sa} - k + 1)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{i=1}^{l_s} \sum_{j_s=1}^{(i)} \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j^{sa}=j_{sa})}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{=n+l_k}^{(n_i-n_{ik}-l_{k_1}+1)} \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)} \sum_{n_{sa}=n-j^{sa}+1}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(i)}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2})}^{()} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - j_s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s - j_{sa} - j^{sa} - l_{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_i - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!} \\
 & \sum_{k=l}^{()} \sum_{(j_s=1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()} \\
 & \sum_{n_i=n+l_k} \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$l_i \leq D + s - n \wedge$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}} = \sum_{j_s=1}^{i-1} \sum_{j_{ik}=0}^{l-1} \sum_{j_{sa}=0}^{k-j_{sa}^{ik}+2} \binom{l-1}{j_s} \binom{l-1}{j_{ik}} \binom{l-1}{j_{sa}} \sum_{j_s+l_{ik}-l_s=0}^{j_s+l_{ik}-l_s} \sum_{j_{ik}+j_{sa}-j_{sa}^{ik}=0}^{j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{j_s+l_{ik}-l_s=0}^n \sum_{j_{ik}+j_{sa}-j_{sa}^{ik}=0}^n \sum_{n_{is}=n+l_{ik}-j_s+1}^n \sum_{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2=0}^n \sum_{n_{ik}=n_{is}-j_{ik}+1}^n \sum_{n_{sa}=n-j_{sa}+1}^n \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\begin{aligned}
 & \sum_{k=1}^{i-1} \sum_{(j_s=1)}^{(\quad)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j^{sa}=j_s)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
 & \frac{(n_i - n_{ik} - j_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - 1)!} \cdot \frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} - j_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - 1)!}{(n_i + j^{sa} - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - l_{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \\
 & \frac{(n_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(\quad)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\quad)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{(\quad)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(\quad)} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}
 \end{aligned}$$

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$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}$$

$$\sum_{k=1}^{j_s} \sum_{l=1}^{j_s - k} \sum_{j_{ik} = k}^{j_s - k} \sum_{j_{sa} = j_s - k - l}^{j_s - k - l} \frac{\binom{n}{n_i = n + k} \binom{n_{ik} = n_{ik}}{n_{ik} = n_{ik}} \binom{n_{sa} = n_{sa}}{n_{sa} = n_{sa}} \binom{l_i - j^{sa} - k_2}{l_i - j^{sa} - k_2}}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)! \cdot (D - l_i)!} \cdot \frac{(D - j^{sa} - n - l_s)! \cdot (n + l_{sa} - j^{sa} - l_i)!}{(D - j^{sa} - n - l_s)! \cdot (n + l_{sa} - j^{sa} - l_i)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq n + j_{sa} - s \wedge \\ & l_i - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \\ & D + s - n < l_i \leq D + l_s + j_{sa} - n + 1) \vee \\ & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \\ & D + s - n < l_{sa} \leq D + l_s + j_{sa} - n + 1)) \wedge \end{aligned}$$

$$D \geq n < n \wedge I = k \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$s > 3 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} (l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)$$

$$\sum_{(j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)}^{(n-D)}$$

$$\sum_{(n_i-n_{is}-1)}$$

$$\sum_{n_{ik}=n+l_{ik}}^{(n_{is}=n+l_{ik}-j_s)}$$

$$\sum_{(j_{ik}=j_{sa}^{ik}+1)}^{(n_{ik}=n+l_{ik}-j_{sa}^{ik}+1)}$$

$$\frac{(n_{ik}-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!}$$

$$\frac{(n_{ik}-n_{ik}-1)!}{(j_{ik}-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j_s-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!}$$

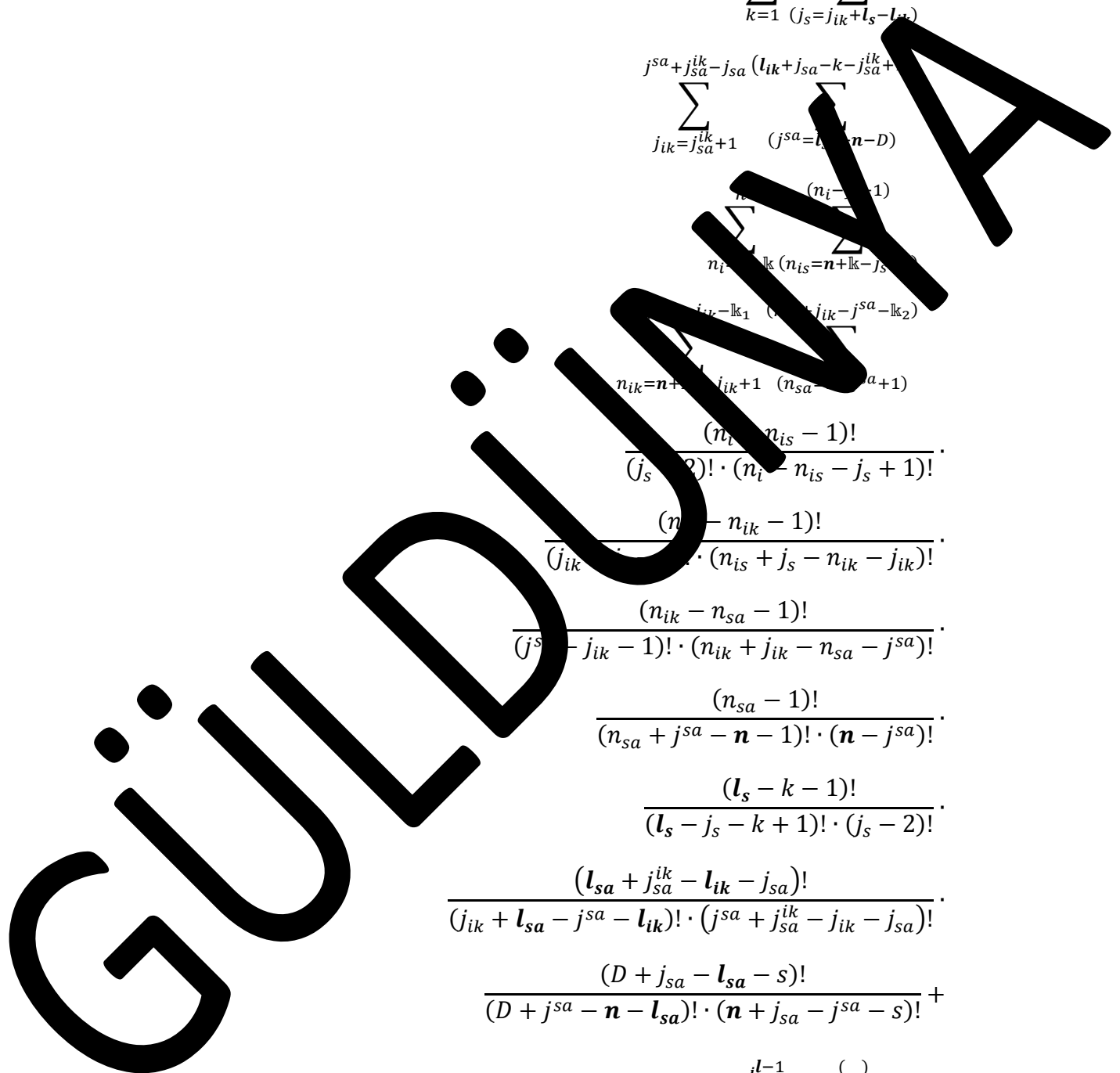
$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2)}^{(l_{sa}-k+1)}$$



$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} + j^{sa} - n - 1)!}{(n_{sa} - n_{ik} - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} - l_{sa} - j_{sa} - 1)! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=i}^{\binom{D}{i}} \sum_{(j_s=1)}^{\binom{D}{i}} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j^{sa}=l_{sa}+n-D)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}
 \end{aligned}$$

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$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - l_{sa})!} \cdot \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{D+l_s+j_{sa}-n-l_{sa}}{k} \sum_{j_s=j_s}^{l_s-l_{ik}} \binom{l_s-l_{ik}}{j_s} \sum_{l_{ik}+j_{sa}-j_s+1}^{l_{ik}+j_{sa}-j_s+1} \sum_{j_s+l_{sa}-j_{sa}}^{j_s+l_{sa}-j_{sa}} \sum_{l=l_{sa}+n-D}^{l=l_{sa}+n-D} \sum_{l_{ik}+j_{sa}-j_s+1}^{l_{ik}+j_{sa}-j_s+1} \sum_{n_{ik}+k}^{n_{ik}+k} \sum_{n_{is}=n+k-j_s+1}^{n_{is}=n+k-j_s+1} \sum_{n_{is}+j_s-j_{sa}-k_1}^{n_{is}+j_s-j_{sa}-k_1} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}^{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2} \frac{(n_i + j_{sa} - j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge l_i - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge (D + s - n < l_i \leq D + l_s + s - n - 1) \vee (D \geq n < n \wedge l_s \leq D - n + 1 \wedge 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}} = \sum_{k=0}^{i-1} \sum_{j_s = j_{ik} + l_s - l_{ik}}^{i-1-k} \sum_{l_{sa} = l_{sa}^{ik} - D - j_{sa}}^{i-1-k-1} \sum_{j_{sa} = l_{sa} + n - D}^{i-1-k-1} \sum_{n_i = n + \mathbb{k}}^n \sum_{n_{is} = n + \mathbb{k} - j_s + 1}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{n_{sa} = n - j_{sa} + 1}^{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_k+1)}^{(n_{is}+1)}$$

$$\sum_{n_{ik}=n_{is}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k1}} \sum_{(j_{sa}+1)}^{(j_{ik}+j_{ik}-j^{sa}-l_{k2})}$$

$$\frac{(n_{is} - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=i^l}^{()} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i^{l+1})} \sum_{(j^{sa}=l_{sa}+n-D)}$$

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$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - l_{ik})!} \cdot \\
& \frac{(l_{sa} - j^{sa} - 1)!}{(l_{sa} - j^{sa} - n - 1)! \cdot (n - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\
& \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}
\end{aligned}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i^{l-1} (l_{sa} + n - D - j_{sa})} \sum_{(j_s=2)}^{(l_{sa}-k+1)} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n)} \sum_{(j^{sa}=l_{sa}+n-D)}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^{(n_i=n+\mathbb{k}-j_s+1)} \sum_{n_{is}=n+j_s-j_{ik}-\mathbb{k}_1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{(n_{sa}=n-j^{sa}+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{i-1} \sum_{l=1}^{k-j_s-2} \sum_{m=1}^{l-k+1} \sum_{n_i=n+l}^{n_i=n+l} \sum_{n_{is}=n+l-k+1}^{n_{is}=n+l-k+1} \sum_{n_{ik}=n+l-k_1}^{n_{ik}=n+l-k_1} \sum_{n_{sa}=n-j^{sa}+1}^{n_{sa}=n-j^{sa}+1} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
 & \sum_{k=1}^n \sum_{i=1}^{(n-k)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j_{sa}=l_{sa}+n)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{n_{sa}=j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-k_2} \\
 & \frac{(n_i - n_{ik})!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \frac{(n_{sa} - n_{ik})!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{sa} + j_{ik} - j_{sa} - j_{sa})!} \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - l_{sa} - l_{ik})! \cdot (j_{sa} - j_{sa})!} \\
 & \frac{(l_{sa} - j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n_i-j_s+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2)}^{(n_i-j_s+1)} \\
 & \frac{(n_i + j_s + j_{sa} - j_{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j_{sa} - s - j_{sa}^s)!}
 \end{aligned}$$

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$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s \leq l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{K} \geq 0$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge s_i = j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s \geq 3 \wedge s = j_{sa} \wedge \mathbb{k} \wedge$$

$$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 \wedge \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-k)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - 1)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(j_{ik} + j_{sa}^{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - j_{sa})! \cdot (j^{sa} - j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=l_s+j_{sa}-k+1)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i-1} \sum_{j_s=1}^{(i-k)} \sum_{j_{ik}=j_{sa}^{lk}}^{(l_{sa}-i+1)} \sum_{j^{sa}=j_{sa}}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-n_{ik}-l_{k_1}+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{lk} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{i-1} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{(i-k)}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}^{(\quad)} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(D - l_i)!}{(D + j^{sa} + s - n - j_{sa})! \cdot (n + j_s + j_{sa} - j^{sa} - s)!} \\
 & \sum_{k=i}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \\
 & \sum_{n_i=n+\mathbb{k}} \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{(\quad)} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
 \end{aligned}$$

$$((D \geq n < n) \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{j_{sa}^s, \dots, j_{sa}^i} = \sum_{k=2}^{i-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s - j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \sum_{k=1}^{(j_s)} \sum_{(j_s=1)}^{(l_{sa}-k+1)} \sum_{(j_{sa}=j_{sa})}^{(n_i - l_{k_1} + 1)} \sum_{(n_i = n + l_k)}^{(n + l_{k_2} - j_{k_1} + 1)} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_i - n_{ik} - 1)!} \cdot \frac{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik} - k + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{()}$$

$$\sum_{n_i = n + l_k}^n \sum_{(n_{is} = n + l_k - j_s + 1)}^{(n_i - j_s + 1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \sum_{k=i}^{\binom{()}{j_s=1}} \sum_{j_{ik}=j_{sa}^{ik} (j^{sa}=j_{sa})} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$(D \geq n < n \wedge l_i \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$n > n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

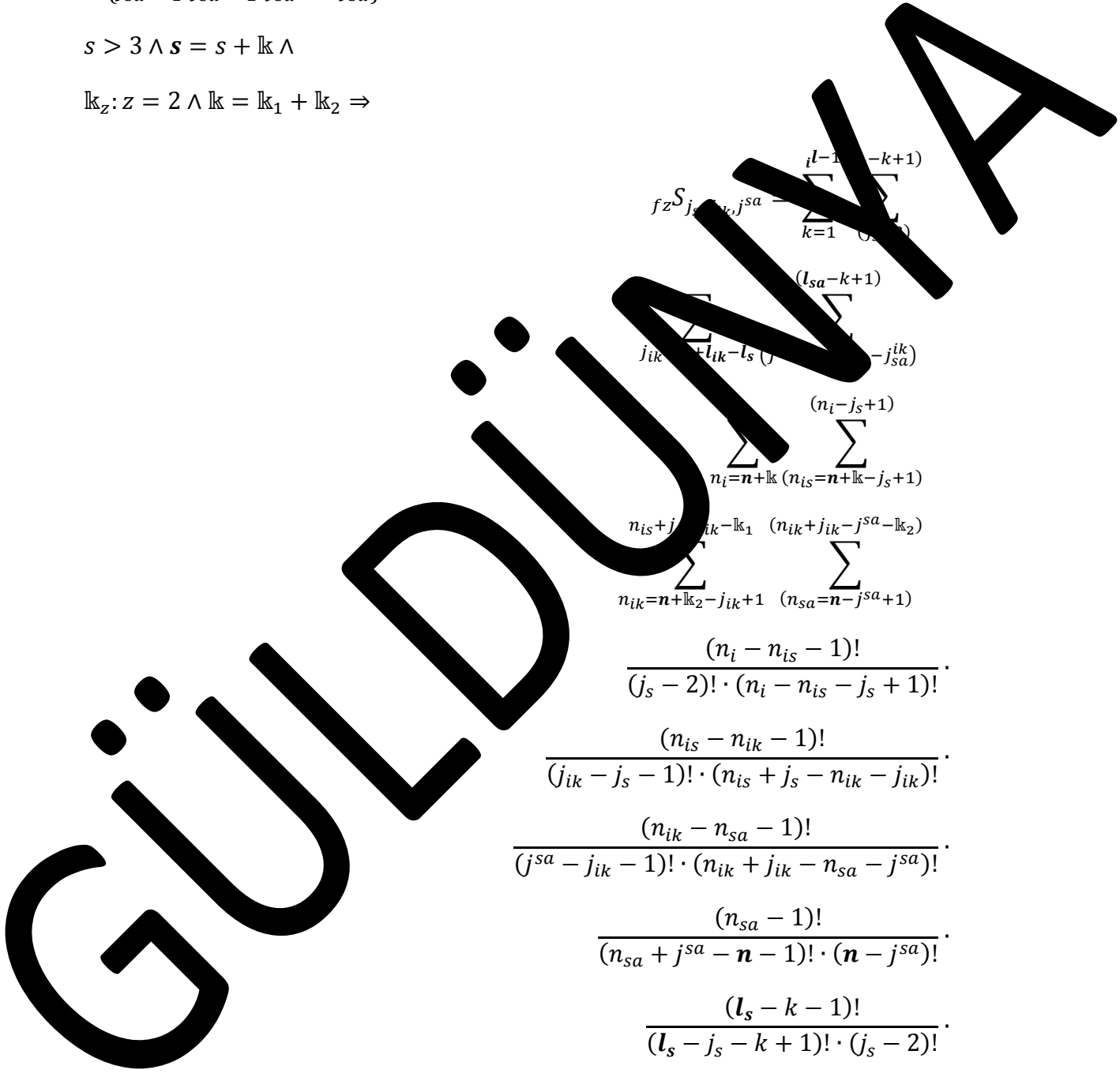
$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$



$$fz S_{j_{sa}^i, j_{sa}^i} = \sum_{k=1}^{i-l-1} \sum_{j_{sa}^i-k+1}^{j_{sa}^i} \frac{(l_{sa}-k+1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik})!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +$$

$$\begin{aligned}
 & \sum_{k=1}^{i-1} \sum_{(j_s=1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j^{sa}=j_s)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
 & \frac{(n_i - n_{ik} - j_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - 1)!} \cdot \frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} + j_{ik} - j^{sa} - 1)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (n - j^{sa})!} \\
 & \frac{(l_{sa} - j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(l_{sa} - j_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{i-1-k-j_{sa}^{ik}+2} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}
 \end{aligned}$$

GÜLDÜŞMÜŞA

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \sum_{k=l}^{()} \sum_{j_s=1}^{()} \sum_{j_{ik}=1}^{()} \sum_{j_{sa}=1}^{()} \frac{(n + j_s + j_{sa} - j^{sa} - k_1 - k_2)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq n + j_{sa} - s \wedge \\ & l_s - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge \\ & D + s - n < l_i \leq D + j_{sa} + s - n - j_{sa}) \vee \\ & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \\ & D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee \\ & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \end{aligned}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{n-j_{sa}^{ik}} = \sum_{k=0}^{j_{sa}^{ik}-j_{sa}} \sum_{l_{sa}=l_{sa}^{ik}-k}^{l_{sa}-l_{ik}} \sum_{j_{sa}^{ik}=j_{sa}^{ik}+1}^{j_{sa}^{ik}-k-j_{sa}} \sum_{j_{sa}^{sa}=l_{sa}+n-D}^{(l_s+j_{sa}-k)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=l_{sa}-k+1)}^{(l_{sa}-k+1)}$$

$$\sum_{n+l_k}^{(n_{is}+1)}$$

$$\sum_{n_{ik}=j_{sa}^{ik}-j_{ik}+1}^{n_s+j_s-j_{ik}-l_{k1}} \sum_{(j^{sa}=1)}^{(n_s+j_{ik}-j^{sa}-l_{k2})}$$

$$\frac{(n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_s - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=i^l}^{()} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i^{l+1})} \sum_{(j^{sa}=l_{sa}+n-D)}$$

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$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik})!} \cdot \\
& \frac{(l_{sa} - j_{sa}^{ik} - 1)!}{(l_{sa} + j_{sa}^{ik} - n - 1)! \cdot (n - j^{sa} - l_{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(j_s=j_{ik}+l_s-l_{ik})} \\
& \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} (j^{sa}=l_i+n+j_{sa}-D-s) \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_i-j_s+1)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^{ik} \leq j_{sa}^{ik} - 1$$

$$s \in \{j_{sa}^s, \mathbb{k}_1, j_{sa}^s, \mathbb{k}_2, j_{sa}^i, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + 1$$

$$\mathbb{k}_z: z \in \mathbb{Z} \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
 & \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - 1)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(j_s + j_{sa} - j^{sa} - j_{sa})!}{(j_s + l_{sa} - j^{sa} - j_{sa})! \cdot (j^{sa} - j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()} \\
 & \sum_{j_{ik} = l_{sa} + n + j_{sa}^{ik} - D - j_{sa}}^{l_s + j_{sa}^{ik} - k} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(l_{sa} - k + 1)} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}
 \end{aligned}$$

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$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{i=1}^{(n)} \sum_{j_s=1}^{(n)} \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{j^{sa}=l_{sa}+n-D}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_{sa}=n-j^{sa}+1}^{(n_i-n_{ik}-l_{k_1}+1)} \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{(n)}$$

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$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_{sa})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{sa}-k_2)} \frac{(n_i+j_s+j_{sa}-j^{sa}-s-k_1-j_s)!}{(n_i-n-k_1-k_2)! \cdot (n+j_s-j_{sa}-j^{sa}-j_s)!} \cdot \frac{(l_s-k-1)!}{(l_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-k)!}{(D+j^{sa}+s-n-k-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - 1) \vee \\ & (D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \\ & D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee \\ & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge \end{aligned}$$

$$(D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}} = \sum_{k=1}^{l-1} \frac{(l_{sa} + j_{sa} - D - j_{sa})}{(j_s - k)} \cdot \frac{(l_{sa} - k + 1)}{\sum_{j_s + l_{ik} - l_s}^{\sum_{j_s + l_{ik} - l_s}^{n-D}}}$$

$$\frac{(n_i - j_s + 1)}{\sum_{n_i = n + \mathbb{k}}^{\sum_{n_i = n + \mathbb{k} - j_s + 1}}}$$

$$\frac{n_{is} + j_{sa} - \mathbb{k} - \mathbb{k}_1}{\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{\sum_{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2}}}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\begin{aligned}
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-i^k)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n-k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{ik}=n-k_2)}^{(n_{is}+j_s-j_{ik}-k_1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}} \sum_{(n_{sa}=n-j^{sa}+j_{sa}-j_{ik})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - j_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{()} \sum_{i^l (j_s=1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-i^{l+1})}
 \end{aligned}$$

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$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{ik}^{ik} - l_{ik} - j^{sa} - j_{ik} - 1)!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{ik} - 1)!} \cdot \\
& \frac{(l_{sa} - j^{sa} - j_{ik} - 1)!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{ik} - 1)!} \cdot \\
& \sum_{k=1}^{D+l_s+n-l_i} \sum_{j_s=l_i+n-D-s+1}^{(l_s-k+1)} \\
& \sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$fz^S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_s+j_{sa}-k)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa})!} + \\
 & \sum_{j_{ik}=j}^{i^{l-1} (l_s - k + 1)} \sum_{j_s=2}^{(l_s - k + 1)} \sum_{j_{sa}=l_s + j_{sa} - k + 1}^{(l_{sa} - k + 1)} \\
 & \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik}=n+k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{n_{sa}=n - j^{sa} + 1}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
 \end{aligned}$$

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$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{i=1}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa}-i+1)} \sum_{(j^{sa}=n+D)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{(n_{sa}=n-j_{ik}-1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - l_{sa} - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{ik} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_{ik} - j_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()}$$

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$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s)!}$$

$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$

$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$

$D + s - n < l_i \leq D + l_{sa} + s - n - (j_{sa}^s) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$

$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$

$D \geq n < n - l = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^i = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^i, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, j_{sa}^s\} \wedge$

$s > 3 \wedge s = l + \mathbb{k} \wedge$

$\mathbb{k}_z: \mathbb{k} > 0 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} + j^{sa} - n - 1)!}{(n_{sa} - j^{sa} - k - 1)! \cdot (n_{sa} - j^{sa} - n + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(n_{sa} + l_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa} - 1)!}{(j_s + l_{ik} - j_{ik} - l_{sa})! \cdot (j_{ik} - j_s - l_{sa} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=i}^{(\)} \sum_{l(j_s=1)}$$

$$\sum_{j_{ik}=l_{sa}}^{l_{sa}+j_{sa}^{ik}-i+l_{sa}+1} \sum_{j_{sa}=D-j_{sa}}^{(\)} (j^{sa}=j_{ik}+l_{sa}-l_{ik})$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

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$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n-k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{ik}=n_{ik}+j_{ik}-j^{sa}-k_1)}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j_{sa}^{ik} - k_1 - l_{sa} - j_{sa}^s)!}{(n_i - n - k_1 - l_{sa} - j_{sa}^{ik} - j_{sa}^s - j_{sa}^s)!} \cdot \frac{(n_{ik} - k_1 - l_{sa} - j_{sa}^s)!}{(n_{ik} - j_s - k_1 - 1)!} \cdot \frac{(n_{ik} - j_s - k_1 - 1)!}{(n_{ik} - j_s - k_1 + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - k_1)!}{(n_{ik} + j_{sa} + s - n - l_i - j_{sa}^{ik} - k_1)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa} - n < l_{ik} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

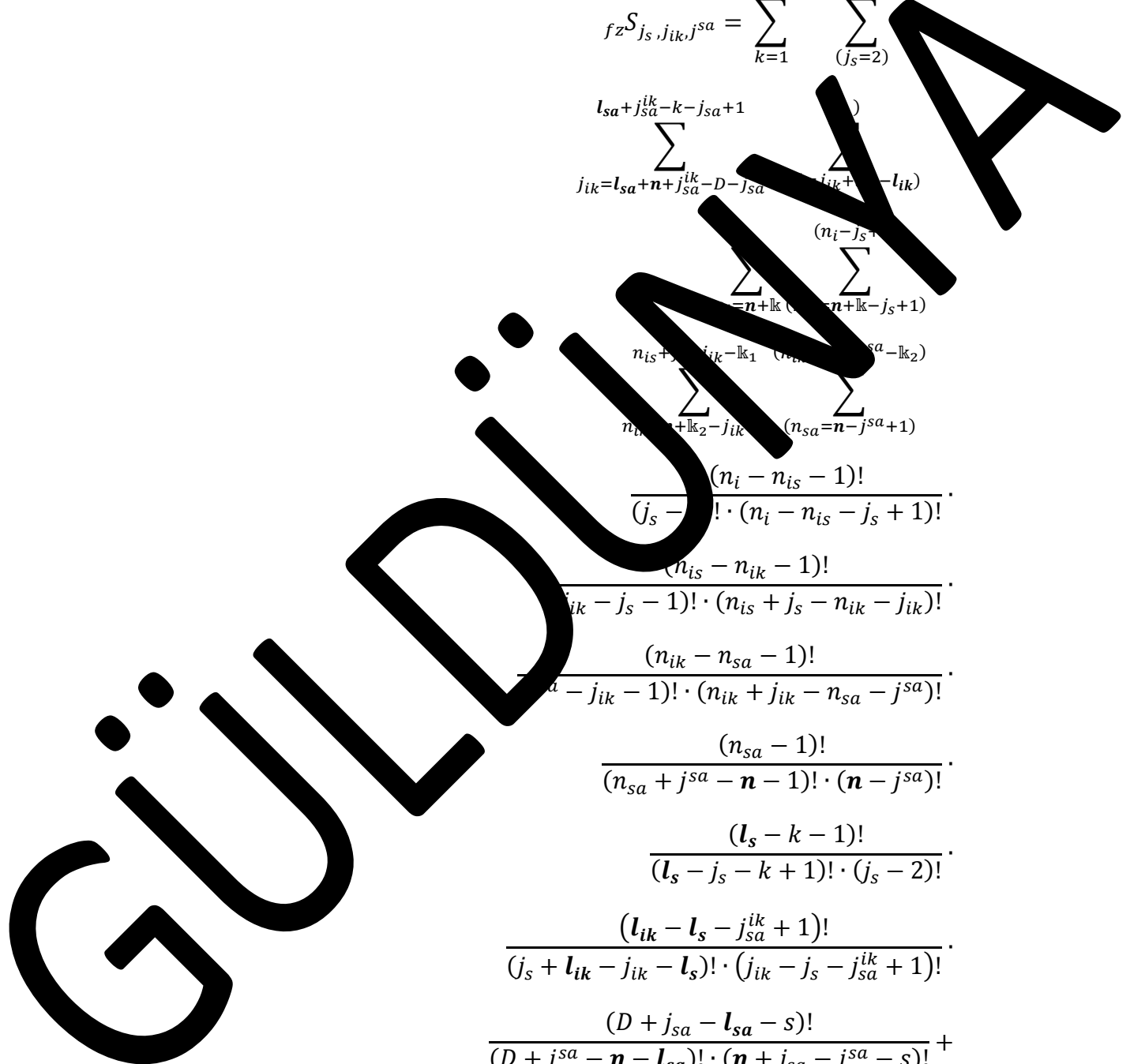
$$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}} = \sum_{k=1}^{i^{l-1} (l_{sa} + n - D - j_{sa})} \sum_{(j_s=2)}^{l_{sa} + j_{sa}^{ik} - k - j_{sa} + 1} \sum_{j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa}}^{(n_i - j_s + 1)} \sum_{(n_{is} + j_{sa}^{ik} - k_1 - (n_{ik} - l_{ik}))}^{(n_i - j_s + 1)} \sum_{(n_{is} + k_2 - j_{ik})}^{(n_{sa} = n - j_{sa} + 1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)}$$



$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \binom{(\quad)}{(\quad)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{\binom{n_i-1}{j_s-2} \binom{n_i-n_{is}-1}{n_i-n_{is}+1}}{\binom{n_{is}-n_{ik}-1}{j_{ik}-j_s-2} \binom{n_{is}+j_{sa}-n_{ik}-j_{ik}}{n_{is}+j_{sa}-n_{ik}-j_{ik}}} \\
 & \frac{\binom{n_{ik}-n_{sa}-1}{j^{sa}-j_{ik}-1} \binom{n+l_{k_2}+j_{ik}-n_{sa}-j^{sa}}{(n+l_{k_2}+j_{ik}-n_{sa}-j^{sa})}}{\binom{n_{sa}-1}{n_{sa}+j_{sa}-n-1} \binom{n-j^{sa}}{(n-j^{sa})}} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} + \\
 & \sum_{k=l}^{\binom{(\quad)}{(\quad)}} \sum_{(j_s=1)}^{\binom{(\quad)}{(\quad)}} \\
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-i-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \binom{(\quad)}{(\quad)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!}
 \end{aligned}$$

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$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \sum_{k=1}^{D+l_s+s-n} \sum_{j_s=l_i+n-D-s}^{(l_s-k-1)} \binom{()}{j_{ik}=j_{sa}^{ik}-1} \binom{()}{(j^{sa}=j_{ik}-l_{sa}-l_{ik})} \sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)} \sum_{i_k=n_{is}+j_s-j_{ik}-k_1}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \binom{()}{(n_s+j_s-j_{sa}-j^{sa}-s-k_1-k_2-j_{sa}^s)!} \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D > n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j_{sa}} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik})} \sum_{(j_s=2)}^{(l_s + j_{sa} - n - j_s - 1)}$$

$$\sum_{j_{ik}=j_{sa} + l_{ik} - l_{sa}}^{(n - j_s + 1)}$$

$$\sum_{(j_s=2)}^{(n - j_s + 1)}$$

$$\sum_{n_{ik}=n - j_{ik} + 1}^{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}$$

$$\sum_{(n_{sa}=n - j_{sa} + 1)}^{(n_i - n_{is} - 1)!}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}$$

GÜLDÜZMÜŞA

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_s+j_{sa}-k+1)}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{sa})}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s+1)!(n_{is}+j_{sa}-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}+1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j^{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +
 \end{aligned}$$

$$\sum_{k=1}^{()} \sum_{l \in I(j_s=1)}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!}
 \end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}} \binom{D+l_s+j_{sa}-k}{k} \sum_{j_s=j_{ik}-j_{sa}^{ik}}^{j_{ik}-1} \binom{l_s-j_s-k}{l_s-j_s-k} \cdot \\
& \sum_{n_i=n+l_k}^{n_i+l_k} \sum_{n_{is}=n+l_k-j_s+1}^{n_i-j_s+1} \binom{n_i-j_s+1}{n_i-j_s+1} \cdot \\
& \sum_{j_{ik}=n_{is}+j_s-j_{ik}-k_1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}^{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2} \binom{D-j_{sa}^{ik}}{D-j_{sa}^{ik}} \cdot \\
& \frac{(n_i - n_{i_1} - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n_{i_1} - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}
\end{aligned}$$

$$D > l_s \wedge n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k \geq 0 \wedge$$

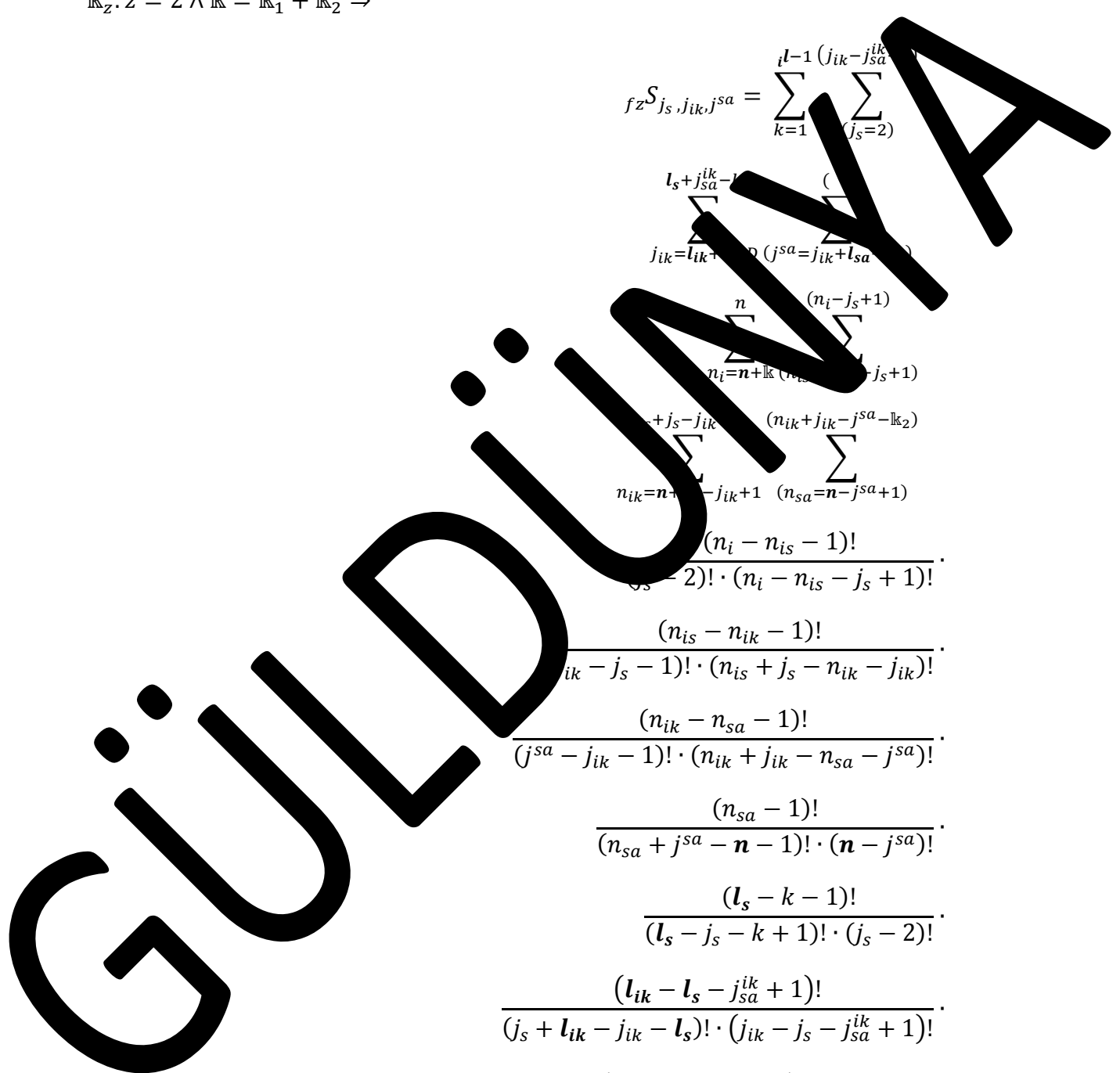
$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik})} \sum_{(j_s=2)} \sum_{j_{ik} = l_{ik} + \dots}^{l_s + j_{sa}^{ik} - 1} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_i - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + \dots}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \sum_{(n_{sa} = n - j_{sa} + 1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}$$



$$\begin{aligned}
 & \sum_{j_{ik}=l_s+j_{sa}^{lk}-k+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s^{sa})}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-j_{sa}-n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j_s-n-1)! \cdot (n-j^{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{lk}+1)!}{(j_s-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{lk}+1)!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +
 \end{aligned}$$

$$\sum_{k=i}^l \sum_{(j_s=1)}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!}
 \end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}} \binom{D+l_s+j_{sa}-k}{k} \binom{j_s=j_{ik}-j_{sa}^{ik}}{j_s} \binom{l_{ik}-k}{j_{ik}-k} \binom{n-D}{j^{sa}=j_{ik}+l_{sa}-l_{ik}} \\
& \sum_{n_i=n+k}^{n_i=n+k} \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \\
& \frac{(n_i - n_{i-1} - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}{(n_i - n_{i-1} - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}
\end{aligned}$$

$$D > n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} \geq 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 3 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}} = \sum_{k=1}^{i^{l-1} (l_{ik} + n - D - j_{sa})} \sum_{s=2}^{(n - j_s + 1)}$$

$$\sum_{j_{ik} = l_{ik} - k + 1}^{(n - j_s + 1)} \sum_{n_{is} = n + \mathbb{k}_1}^{(n - j_s + 1)}$$

$$\sum_{n_{ik} = n - j_{ik} + 1}^{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)} \sum_{n_{sa} = n - j_{sa} + 1}^{(n_i - n_{is} - 1)!}$$

$$\frac{(n_i - n_{is} - 1)!}{(n_{is} - n_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s = l_{ik} + n - D - j_{sa}^{ik} + 1)}^{(l_s - k + 1)}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
 & \sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+lk_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-lk_1} \sum_{(n_{sa}=j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-lk_2)} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(j_{ik}-j_s-j_{sa}-n_{is}+n_{ik}-j_{ik})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j^{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{lk}+1)!}{(j_{ik}-l_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{lk}+1)!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=i}^l \sum_{(j_s=1)}^{()} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
 & \sum_{n_i=n+lk}^n \sum_{(n_{ik}=n+lk_2-j_{ik}+1)}^{(n_i-j_{ik}-lk_1+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{n_{ik}+j_{ik}-j^{sa}-lk_2} \\
 & \frac{(n_i-n_{ik}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}+1)!}
 \end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{l_s-k+1}^{l_s-k+1} \sum_{l_{ik}+n-D-j_{sa}^{ik}}$$

$$j_{ik} = j_{sa}^{ik} - 1 \quad (j^{sa} = j_{ik} - l_{sa} - l_{ik})$$

$$\sum_{n_i=n+l_k}^{n_i=n+l_k} \sum_{(n_i=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{l_{ik}=n_i+j_s-j_{ik}-l_{k_1}}^{l_{ik}=n_i+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n_{sa} - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}$$

GÜLDÜNYA

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z,j_s,j_{ik}} = \sum_{j_s=1}^{n-l_{sa}} \sum_{j_{ik}=j_{sa}+j_s-1}^{n-l_{sa}+j_s-1} \sum_{j_{sa}=l_{sa}+n-D}^{j_{sa}-k-j_{sa}^{ik}+1} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\begin{aligned}
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \\
 & \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \right. \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik})}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik})} \\
 & \sum_{n+l_k}^{(n_{is}+1)} \sum_{(n_{is}=n+l_{ik}+k+1)}^{(n_{is}+1)} \\
 & \sum_{n_{ik}=l_{ik}+n-D}^{n+l_s-j_{ik}-l_{k_1}} \sum_{(j_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(j_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \sum_{(j_{ik}-j_{ik}-1)!}^{(n_{is}-1)!} \sum_{(j_{ik}-2)! \cdot (n_{is}-j_s+1)!}^{(n_{is}-1)!} \\
 & \frac{(n_{is}-n_{sa}-l_{k_1}-1)!}{(j_{ik}-j_{ik}-1)! \cdot (n_{ik}+j_s-n_{ik}-j_{ik}-l_{k_1})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{ik}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \\
 & \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-k+1} \sum_{(j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2)}^{(l_{sa}-k+1)}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} + j_s - n - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (j^{sa})!} \cdot \\
 & \frac{(n - j_s - n + 1)! \cdot (j_s - 2)!}{(j_s - n + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} - l_{sa} - j_{sa}^{ik} - l_{ik} - j_{sa})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-k+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
 \end{aligned}$$

GÜLDENSA

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa} - n_{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (n_{sa} + j_{sa}^{lk} - j_{sa} - j_{sa}^{ik})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j^{sa} - n - l_i - j_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{l_i + s - n - l_i} \sum_{(j_s = j_{ik} + l_s - l_{ik})} (j_s - k + 1) \cdot \\
& \sum_{j_{ik} = j_{sa}^{lk} - j_{sa}}^{l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)} (n_i - j_s + 1) \cdot \\
& \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \cdot \\
& \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\quad)} \cdot \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

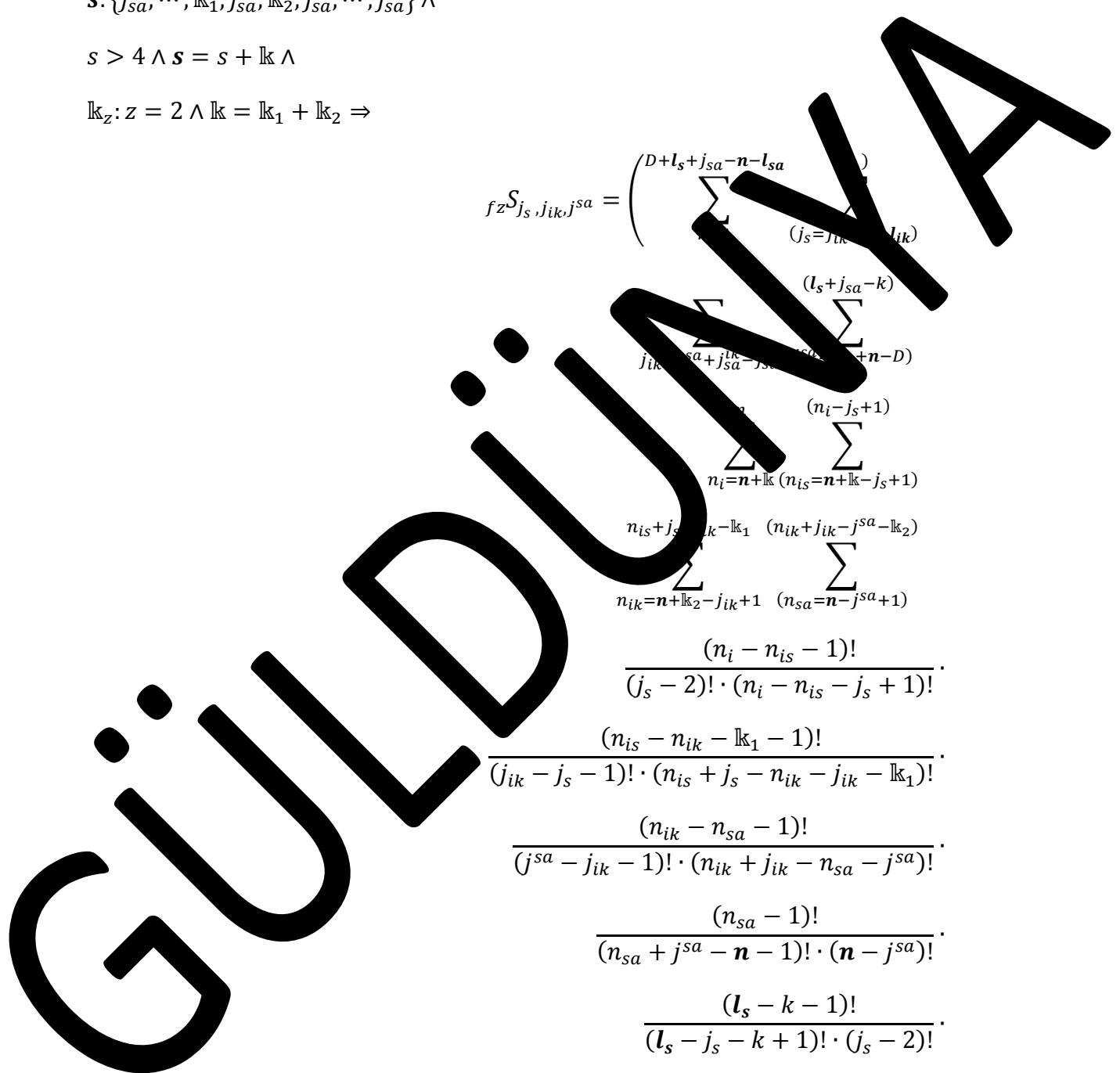
$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}} = \binom{D+l_s+j_{sa}-n-l_{sa}}{\sum_{j_s=j_{ik}+l_s-l_{ik}}^{(l_s+j_{sa}-k)} (j_s=j_{ik}+l_s-l_{ik})} \binom{(l_s+j_{sa}-k)}{\sum_{j_{ik}+j_{sa}+j_{sa}^{ik}-j_{sa}}^{(n-D)} (l_s+j_{sa}-k)} \binom{(n-j_s+1)}{\sum_{n_i=n+k}^{(n_i=n+k-j_s+1)} (n_i=n+k-j_s+1)} \binom{n_i+j_{sa}-k-k_1}{\sum_{n_{ik}=n+k_2-j_{ik}+1}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} (n_{ik}+j_{ik}-j_{sa}-k_2)} \binom{(n_i-n_{is}-1)!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} + \binom{D+l_s+j_{sa}-n-l_{sa}}{\sum_{k=1}^{()}} \binom{()}{\sum_{j_s=j_{ik}+l_s-l_{ik}}^{()}}$$



$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_s+j_{sa}-k)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_1)} \\
 & \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1) \cdot (n_{is}-n_{ik}-j_{ik}-k_1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j_s-n-1)! \cdot (n-j^{sa})!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{sa}+j_{sa}^{ik}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \cdot \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} + \\
 & \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=l_s+j_{sa}-k+1)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (l_s - k - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j_{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=D+l_s+j_{sa}^{ik}-n+1}^{n+1} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{n-l_{sa}+1} \sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-k} \sum_{j^{sa}=l_{sa}+n-D}^{(l_{sa}-k+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
\end{aligned}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=0}^{D+l_s+s-n-l_i} \binom{D+l_s+s-n-l_i}{j_s=j_{ik}+l_s-l_{ik}}$$

$$\sum_{j_{ik}=j_{ik}-j_{sa}}^{l_s+l_{sa}} \binom{l_s+l_{sa}}{j^{sa}+n+j_{sa}-D-s}$$

$$\sum_{n_{is}=n+l_k}^{j_s+1} \binom{j_s+1}{n_{is}=n+l_k-j_s+1}$$

$$\sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_1}^{n_{is}+j_s-j^{sa}-k_1} \binom{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}$$

$$\frac{(n_i + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n \wedge l_s > D - 1 + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - l_{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right) \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\cdot)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n-j_s+1)} \frac{(n_{is}+j_s-j_{ik})!}{(n_{ik}+j_{ik}-j_{sa}^{ik})!} \frac{(n_i-n_{is})!}{(j_s-2)! \cdot (n_i-n_{is}-j_s+1)!} \frac{(n_{is}-j_{ik}-\mathbb{k}_1+1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-\mathbb{k}_1)!} \frac{(n_i-n_{sa}-1)!}{(n_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \Big) + \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \right) \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{(l_{sa}-k+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_{ik}=\mathbb{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=\mathbb{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (\mathbb{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - 1)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(j_{ik} + j_{sa}^{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - 1)! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbb{n} - l_{sa} - 1)! \cdot (\mathbb{n} + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{l_s+j_{sa}-\mathbb{n}-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\
 & \sum_{j_{ik}=l_{ik}+\mathbb{n}-D}^{l_{sa}+\mathbb{n}+j_{sa}^{ik}-D-j_{sa}-1} \sum_{(j^{sa}=l_{sa}+\mathbb{n}-D)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=\mathbb{n}+\mathbb{k}}^{\mathbb{n}} \sum_{(n_{is}=\mathbb{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=\mathbb{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=\mathbb{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}
 \end{aligned}$$

GÜLDÜZMÜŞA

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_s)!} + \\
 & \sum_{k=D+l_{sa}-n-l_{sa}}^{D-n+1} \sum_{l_{sa}=l_{ik}+n-D}^{(j_s - l_{sa} - l_{ik})} \sum_{j_s=l_{sa}+n-D}^{(l_{sa}-k+1)} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \left(\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{sa}-j_{sa}^{ik})}^{()} \sum_{n+kk}^n \sum_{(n_i=n_i+1)}^{(n_i+1)} \sum_{n=n_{is}+j_{sa}-kk_1}^{(n_{sa}-l_{sa}-j_{sa}-kk_2)}^{()} \frac{(n_i + j_s + j_{sa}^{sa} - s - n_i - kk_2 - j_{sa}^s)!}{(n_i - n - kk_1 - kk_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} + j_{sa}^{ik} + 1 \wedge j_{ik} + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - j_{sa}^{ik} \wedge$$

$$l_{ik} - j_{sa} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n - l_s = kk > \wedge$$

$$j_{sa} - j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, kk_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > j_{sa} - j_{sa}^{ik} = s + kk \wedge$$

$$kk_z: z = 2 \wedge kk = kk_1 + kk_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right)$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-k} \binom{(\quad)}{\sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_1)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_i - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_i - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \right) + \\
 & \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{(\quad)}{\sum_{j_s=j_{ik}+l_s-l_{ik}}} \right. \\
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-k} \sum_{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \\
 & \left. \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \right)
 \end{aligned}$$

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$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{lk} - j_{sa} - l_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D + j_{sa} - n - l_{sa}} \sum_{(j_s = j_{ik} + l_s - l_{ik})}$$

$$\sum_{(l_{sa} + n + j_{sa}^{ik} - D - j_{sa} - 1)} \sum_{(j^{sa} = l_{sa} + n - D)} (l_{sa} - k + 1)$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-k} \sum_{(l_s-k+1)}^{()}$$

$$\sum_{(n_i-j_s+1)}^{()} \sum_{(n_{is}+j_s-n_{ik}-k_1)}^{()}$$

$$\sum_{n_{ik}+k_2-j_{ik}+1}^{()} \sum_{(n_{sa}=n-j^{sa}+1)}^{()}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

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$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{sa}-k_2)} \frac{(n_i+j_s+j_{sa}-j^{sa}-s-k_1-j_s)!}{(n_i-n-k_1-k_2)! \cdot (n+j_s-j_{sa}-j^{sa}-j_s^s)!} \cdot \frac{(l_s-k-1)!}{(j_s-k+1)! \cdot (j_s-2)!} \frac{(D-k)!}{(D+j^{sa}+s-n-k-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik} - 1 < j_{ik} \leq j_s + j_{sa} - j_s^{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n - l_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = j_s > 0 \wedge$$

$$j_s \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa}^i - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{ \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_s \}$$

$$j_s > 4 \wedge j_s = s + k \wedge$$

$$k_z: z = 2 \wedge k_1 = k_2 = 1 \wedge z = 2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \right)$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \dots$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} + j^{sa} - n - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (j_s - 1)!} \cdot \\
& \frac{(n_{sa} - k - 1)!}{(n_{sa} - j_s - n + 1)! \cdot (j_s - 2)!} \cdot \\
& \left(\frac{(D + j_{sa} - j^{sa} - s)!}{(n + j_{sa} - j^{sa} - s)!} \right) + \\
& \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \right) \\
& \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{(l_{sa}-k+1)} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa})!} + \\
& \sum_{j_s = j_s + l_{ik} - l_s}^{D + l_s + j_{sa} - n - l_{sa}} \sum_{j_{sa} = l_{sa} + n - D - j_{sa}}^{l_{sa} + n - D - j_{sa}} \sum_{j_{sa}^{ik} = j_{sa}^{ik} - j_{sa}^{ik} + 1}^{j_{sa}^{ik} - j_{sa}^{ik} + 1} \sum_{j_{sa} = j_{sa} - k + 1}^{l_{sa} - k + 1} \sum_{j_{sa} = j_{sa} - k + 1}^{j_{sa} - k + 1} \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot
\end{aligned}$$

$$\begin{aligned}
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{n+l_{ik}} \sum_{(j_s=l_{ik}+n-D)}^{(l_{sa}-k+1)} \\
 & \sum_{(n_{is}=n+l_{ik}+1)}^{(n_{is}+1)} \\
 & \sum_{(n_{is}=n+l_{ik}+1)}^{n+l_{ik}} \sum_{(n_{is}=n+l_{ik}+1)}^{(n_{is}+1)} \\
 & \sum_{(n_{is}=n+l_{ik}+1)}^{n+l_{ik}} \sum_{(n_{is}=n+l_{ik}+1)}^{(n_{is}+1)} \\
 & \frac{(n_{is} + j_s - j_{ik} - k_1 - 1)! \cdot (n_{is} + j_{ik} + j_{ik} - j^{sa} - k_2 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{is} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)! \cdot (l_s - 2)!}{(l_s - j_s - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - 1)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = \dots + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \dots + \mathbb{k}_2 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \right)$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\quad)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - 1)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
& \left(\frac{(D + j^{sa} - n - s)!}{(D + j^{sa} - n - s)! \cdot (n_{sa} - j^{sa} - s)!} + \right. \\
& \left. \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(D+l_s+j_{sa}-l_{sa})} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \right) \\
& \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_{sa}-k+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{(l_{sa}-k+1)} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}-j^{sa}} \sum_{j_s=l_s+n-j^{sa}}^{l_{sa}+n-j_{sa}} \frac{(l_{sa}-k+1)!}{(j_{ik} + l_{ik} - l_s - j_s - n - D)!} \cdot \\
& \sum_{n_i=n+k}^{n_i-j_s+1} \sum_{n_{is}=n+k-j_s+1}^{n_i-j_s+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_{ik}-k_1} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

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$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1} \sum_{(n_{sa}=n-j^{sa}-k_2)}^{(n_{ik}+j_{ik}-n_{sa}-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_{ik} - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(l_s+j_{sa}-k)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=l_{sa}+n-D)}^{(n_i-j_s+1)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \right) \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa})!} +$$

$$\sum_{k=0}^{D+l_s+j_{sa}-l_{sa}} \sum_{l_{sa}=j_{ik}-j_{sa}}^{j_{ik}-j_{sa}}$$

$$\sum_{j_{ik}=l_{sa}+l_{ik}-l_{sa}}^{l_s+j_{sa}-k} \sum_{(j^{sa}=l_{sa}+n-D)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)}$$

$$\sum_{n_{ik}=n+l_k}^{n} \sum_{(n_{is}=n+l_k-1)}^{(n_{ik}+j_{ik}-j^{sa}-1)}$$

$$\sum_{n_{ik}+k_2-j_{ik}}^{n_{is}+j_s-j_{ik}-1} \sum_{(n_{sa}=j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-1)}$$

$$\frac{(n_{is} - k_1 - 1)!}{(n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - k_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - 1)!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_{sa} + j^{sa} - n - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (j^{sa} - 1)!} \cdot$$

$$\frac{(n_{sa} - n - k - 1)!}{(n_{sa} - n - 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(n_{sa} + l_{ik} - j_{sa}^{ik} + 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-k)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

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$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} S_{(i_s, j_{ik})} &= \sum_{k=1}^{(D+l_s-j_{sa}-n-l_{sa})} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\ & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\ & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \end{aligned}$$

$$\begin{aligned}
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \left(\sum_{k=0}^{D+l_s+j_{sa}-n-l_{sa}} \binom{j_{ik}-j_{sa}^{ik}}{j_s-k+n-D} \right) \\
& \sum_{j_{ik}=0}^{l_s+j_{sa}-k} \binom{j_{ik}-j_{sa}^{ik}}{j_s-k+n-D} \sum_{i_{ik}=0}^{j_{ik}+l_{sa}-l_{ik}} \binom{j_{ik}-j_{sa}^{ik}}{j_s-k+n-D} \\
& \sum_{n_i=0}^n \binom{n_i+n-k-j_s+1}{n_i+n-k-j_s+1} \\
& \sum_{n_{is}=0}^{n_i+j_{ik}-k_1} \binom{n_{ik}+j_{ik}-j^{sa}-k_2}{n_{is}=n-j^{sa}+1} \\
& \sum_{n_{i_2}=0}^{n_{i_1}-j_{ik}+1} \binom{n_{sa}=n-j^{sa}+1}{n_{i_2}=n-j^{sa}+1} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\begin{aligned}
 & \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-k-j_{sa}+1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa})}^{(j_{ik}-k_2)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} + j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\begin{aligned}
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - 1)!}{(l_s - j_s + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \right) - \\
& \sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
& \sum_{j_{ik}=\mathbf{l}_i+\mathbf{n}+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^n \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=\mathbf{n}_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=\mathbf{n}_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
\end{aligned}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z S_{j_s, j_{sa}}^{j_{sa}} = \sum_{k=0}^{(D + j_{sa} - n - 1)} \sum_{(j_s = l_{sa} + n - D - j_{sa} + 1)}^{(l_s - k + 1)} \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{(j_s - 1)} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{(j_s - 1)} \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

GÜLDÜZÜMÜYA

$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \\
 & \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \right) \\
 & \sum_{j_{ik}=j_s+l_{sa}^{ik}-k-j_{sa}+1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{(n_{is}+j_s-l_{sa}-k-k_1)}^{(n_{is}+j_s-l_{sa}-k-k_1)} \sum_{(n_{ik}+j_{sa}^{ik}-k-k_2)}^{(n_{ik}+j_{sa}^{ik}-k-k_2)} \\
 & \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{sa}=n-j^{sa}+1)} \sum_{(n_i-n_{is}-1)!} \\
 & \frac{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}{(n_{is} - n_{ik} - k_1 - 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) + \\
 & \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_{sa}+n-D-j_{sa})}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \binom{(\quad)}{\quad} \\
 & \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}+j_{ik}-j_{sa}-k_1)} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-k_1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j_{sa})!} \cdot \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j_s-n-1)! \cdot (n-j_{sa})!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} + \\
 & \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{j_s=l_s+n-D}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \binom{(\quad)}{\quad} \\
 & \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}+j_{ik}-j_{sa}-k_2)}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa} - 1)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j_{sa}^{ik} + 1)!} \cdot \\
 & \left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (D + j_{sa} - j^{sa} - s)!} \right) \cdot \\
 & \sum_{i=1}^{l_s + s - n - l_i} \sum_{j_s = l_i + n - D - s + 1}^{(l_s - k + 1)} \\
 & \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{(j_{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{(j_{sa} = j_{ik} + l_{sa} - l_{ik})}^{(j_{sa} = j_{ik} + l_{sa} - l_{ik})} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1}^{(j_{sa} = j_{ik} + l_{sa} - l_{ik})} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(j_{sa} = j_{ik} + l_{sa} - l_{ik})} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz_{j_s, j_{ik}, j_{sa}}^S = \sum_{k=0}^{(D+l_s+j_{sa}-j_{sa}^{ik})} \sum_{(j_{sa}^{ik}-j_{sa}^{ik}+1)}^{(j_{sa}^{ik}-j_{sa}^{ik}+1)} \sum_{(l_s+j_{sa}-k)}^{(l_s+j_{sa}-k)} \sum_{j_{ik}=j_{sa}^{ik}+l_{ik}}^{(j_{sa}^{ik}+l_{ik})} \sum_{(j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})}^{(j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) +$$

$$\begin{aligned}
 & \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{ik})} \right) \\
 & \sum_{j_{ik}=j_{sa}^{sa}+l_{ik}-l_{sa}} \sum_{(j_{sa}=l_{ik}+n+j_{sa}-D)}^{(l_s+j_{sa}-k)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{is}-j_s-k_2)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}} \sum_{(n_{sa}=n-j_{sa}+1)} \\
 & \frac{(n_{is}-1)!}{(j_s-1)! \cdot (n_i-j_s+1)!} \cdot \frac{(n_{is}-n_{ik}-1)!}{(n_{is}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-k_1)!} \\
 & \frac{(n_{ik})! \cdot (n_{sa}-1)!}{(j_{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} + \\
 & \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j_{sa}^{sa}+l_{ik}-l_{sa}} \sum_{(j_{sa}=l_s+j_{sa}-k+1)}^{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}
 \end{aligned}$$

GÜLDENREYER

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - n_{sa} - j^{sa} + 1)!}$$

$$\frac{(n_{sa} + j^{sa} - n - 1)!}{(n_{sa} - j^{sa} - n + 1)! \cdot (j_s - 1)!}$$

$$\frac{(l_{ik} - j_{sa} - k - 1)!}{(n_{is} - j_s - n + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - j_{sa} - j_{sa}^{ik} + 1)!}{(n_{is} + l_{ik} - j_{sa} - j_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

GÜLDÜŞMAYA

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j^{sa} - n - 1)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{l_s + s - n - l_i} \sum_{(j_s = j_{ik} - j_{sa} + 1)}$$

$$\sum_{j_{ik} - l_{sa}}^{(l_s + j_{sa} - k)} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

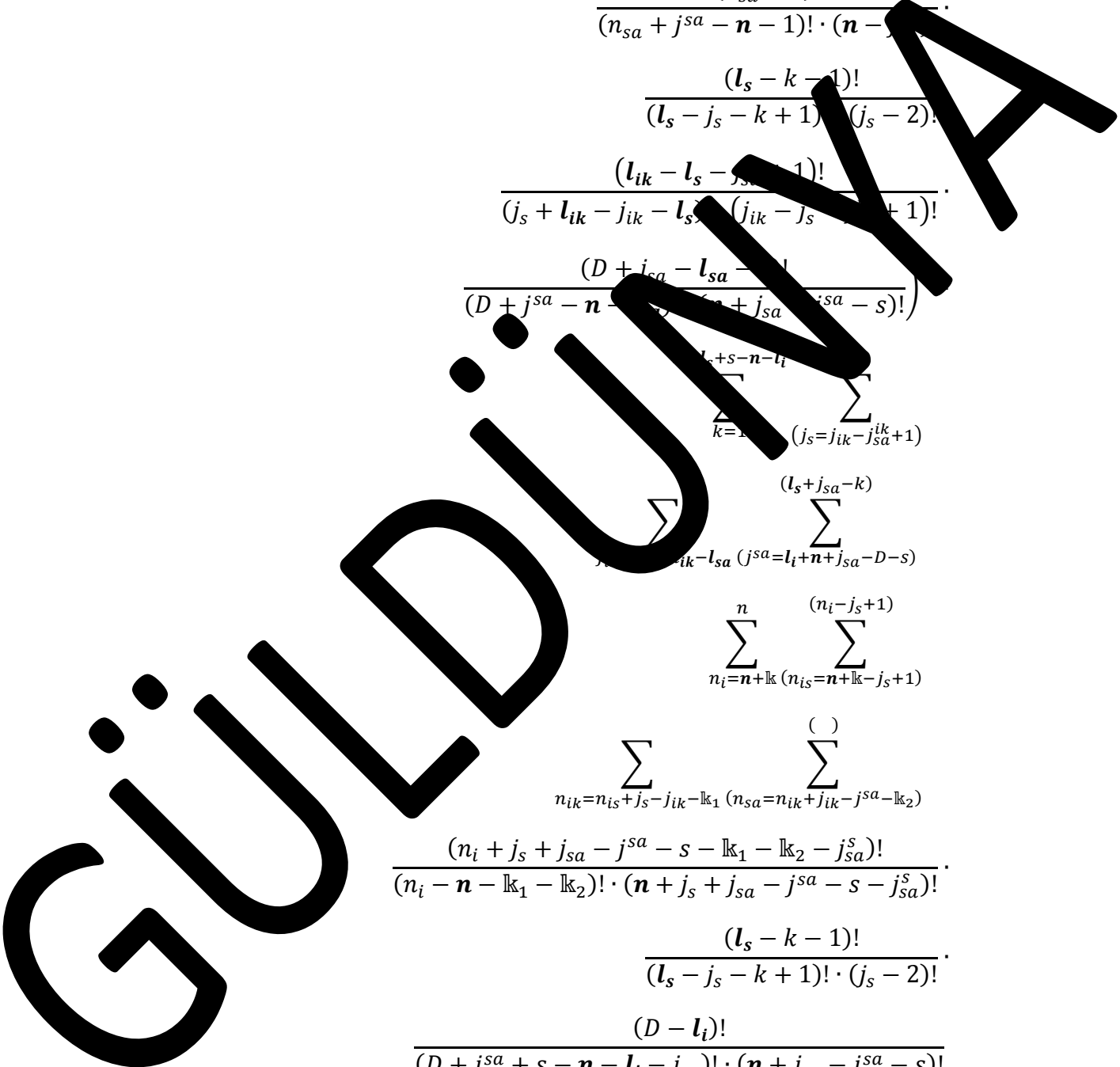
$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$



$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

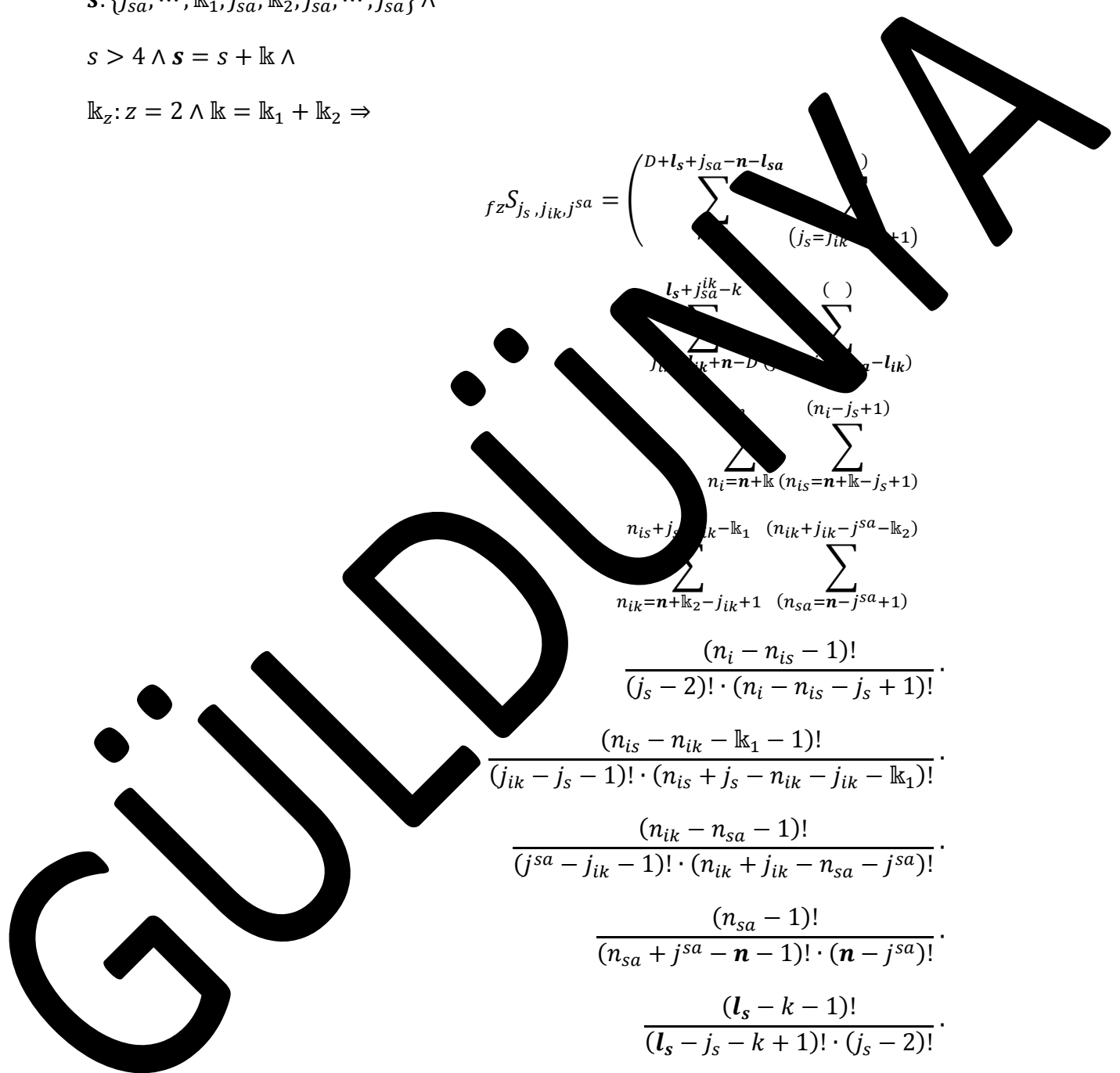
$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}} = \binom{D+l_s+j_{sa}-n-l_{sa}}{\sum_{j_s=j_{ik}+1}^{D+l_s+j_{sa}-n-l_{sa}}} \binom{l_s+j_{sa}^{ik}-k}{\sum_{j_{ik}=k_1+n-D}^{l_s+j_{sa}^{ik}-k}} \binom{n_i-j_s+1}{\sum_{n_i=n+k}^{n_i-j_s+1}} \binom{n_i+n+k}{\sum_{n_{is}=n+k-j_s+1}^{n_i+n+k}} \binom{n_{is}+j_{sa}-k-k_1}{\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_{sa}-k-k_1}} \binom{n_{ik}+j_{ik}-j_{sa}-k_2}{\sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-k_2}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$



$$\left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{ik})} \right)$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+l_{sa}-)}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}-k_1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{is}-j_s+1-k_2)}$$

$$\frac{(n_{is}-1)!}{(j_s-1)! \cdot (n_i-j_s+1)!}$$

$$\frac{(n_{ik}-k_1-1)!}{(n_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-k_1)!}$$

$$\frac{(n_{ik}-1)! \cdot (n_{sa}-1)!}{(j^{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!}$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} + j_s - n - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(n_{is} + l_{ik} - j_{sa}^{ik} + 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
 \end{aligned}$$

GÜLDÜŞMÜŞ

$$\begin{aligned}
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j_s - j_{sa} - 1)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - 1)!} \cdot \\
& \frac{(D + j^{sa} - l_{sa} - 1)!}{(D + j^{sa} - n - l_i - 1)! \cdot (n + j^{sa} - j_s - s)!} \cdot \\
& \sum_{k=1}^{l_s + j_s - k} \sum_{(j_s = j_{ik} - j_{sa} + 1)}^{l_s + s - n - l_i} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{n + j_{sa} - D - s} \sum_{(n_i = n + \mathbb{k})}^{n_i - j_s + 1} \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{(n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1)} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(n_i - j_s + 1)} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

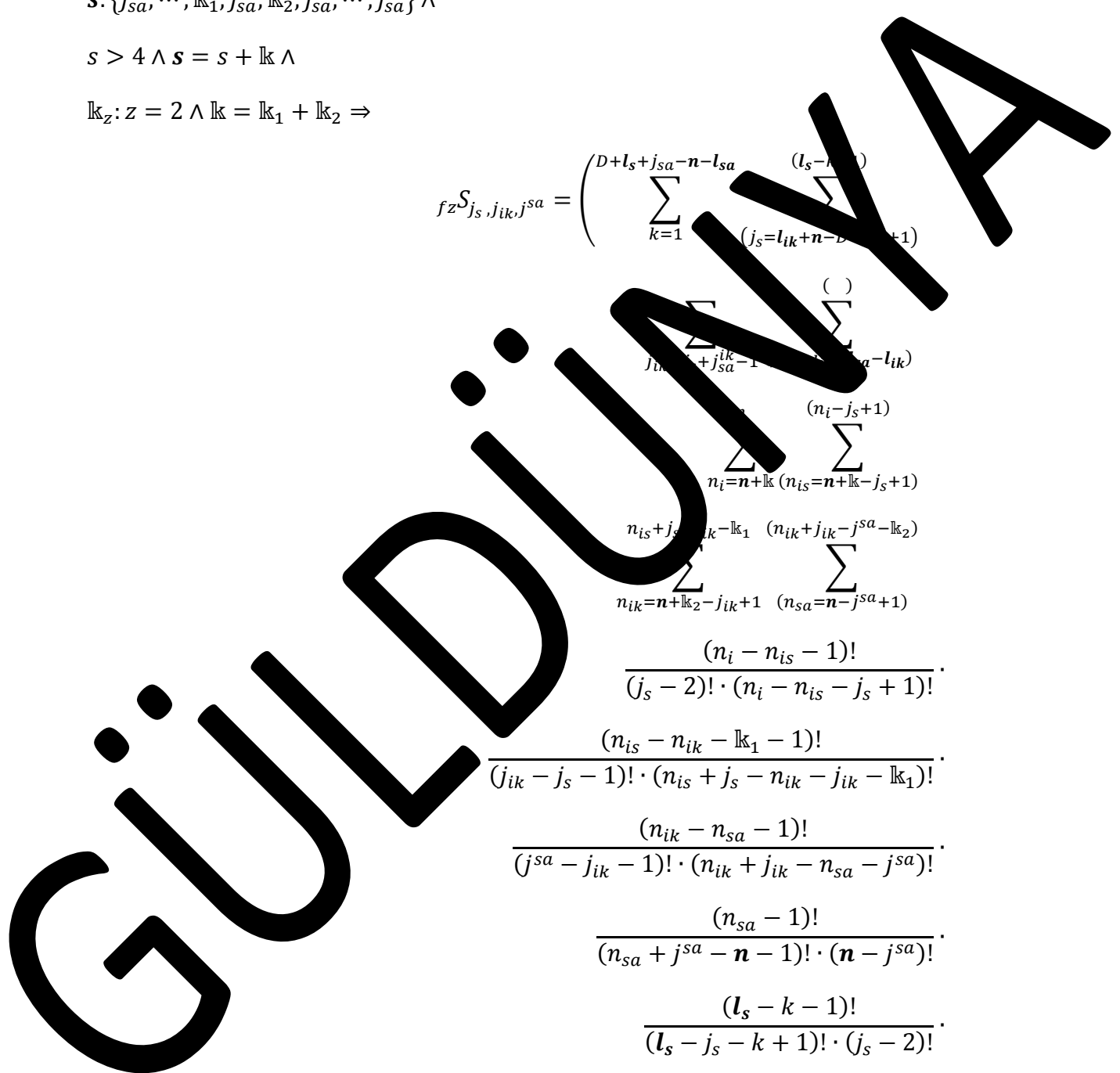
$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \sum_{(j_{ik}+j_{sa}^{ik}-1)}^{(n_{is}-j_s+1)} \sum_{(n_i=n+k)}^{(n_i=n+k-j_s+1)} \sum_{(n_{is}+j_{sa}^{ik}-k-k_1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \sum_{(n_{ik}=n+k_2-j_{ik}+1)}^{(n_{sa}=n-j_{sa}+1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \right) + \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_s-k+1)} \right)$$



$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}}^{l_{ik}-k+1} \binom{(\quad)}{\quad} \\
 & \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)!(n_{is}-n_{ik}-j_{ik}-l_{k_1})!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)!(n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)!(n-j^{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)!(j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{lk}+1)!}{(j_{ik}-l_{ik}-j_{ik}-l_s)!(j_{ik}-j_s-j_{sa}^{lk}+1)!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})!(n+j_{sa}-j^{sa}-s)!} + \\
 & \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_s+n-D)}^{(l_{ik}+n-D-j_{sa}^{lk})} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-k+1} \binom{(\quad)}{\quad} \\
 & \sum_{n_i=n+l_k}^n \sum_{n_{is}=n+l_k-j_s+1}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (l_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - j_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=D+l_s}^{n-n+1} \sum_{j_s=l_s+n-D}^{l_s-k+1} \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(n)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}
 \end{aligned}$$

GÜLDÜZ

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$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-l_{sa}-s+1)}^{(j_s=k+1)} \sum_{(j_s=j_{sa}-1)} \sum_{(j_s=l_{sa}-l_{ik})} \sum_{(j_s=s+1)} \sum_{(n_{is}=n+k-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \frac{(n_i + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n \wedge l_s > D - 1 + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge I = k > 0 \wedge$

$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge s = s + k \wedge$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^{\mathcal{S}_{j_s, j_{ik}, j^{sa}}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{sa}-k+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)}$$

$$\frac{\binom{n_{is}+j_s-j_{ik}-\mathbb{k}_1}{j_s-j_s+1} \binom{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}{n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2}}{\binom{n_i-j_s+1}{j_s-j_s+1} \binom{n_i-n_{is}-j_s+1}{n_i-n_{is}-j_s+1}}$$

$$\frac{\binom{n_{is}-n_{ik}-\mathbb{k}_2}{j_s-j_s-1} \cdot \binom{n_i+j_s-n_{ik}-j_{ik}-\mathbb{k}_1}{n_i+j_s-n_{ik}-j_{ik}-\mathbb{k}_1}}{\binom{n_{is}-n_{sa}-1}{j_s-j_s-1} \cdot \binom{n_{ik}+j_{ik}-n_{sa}-j^{sa}}{n_{ik}+j_{ik}-n_{sa}-j^{sa}}}$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{sa}-k+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)}$$

$$n_i=n+\mathbb{k} \quad (n_{is}=n+\mathbb{k}-j_s+1)$$

GÜLDÜZMAYA

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} - j_{ik} \wedge l_i + j_{sa} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \frac{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)}{\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \frac{n_{is}+j_s-j_{ik}-\mathbb{k}_1}{\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}} \frac{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}{\sum_{(n_{sa}=n-j^{sa}+1)}} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa} - s)!}$$

$$\sum_{l_i=0}^{D+l_s+s-j_{ik}} \sum_{l_{sa}=0}^{(j_s+l_s-l_{ik})}$$

$$(l_{ik} + j_{sa} - k - j_{sa}^{ik} + 1)$$

$$\sum_{j_{ik}=j^{sa}-l_{sa}}^{j^{sa}-l_{sa}} \sum_{l_i=0}^{j^{sa}-l_i+n+j_{sa}-D-s}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()}$$

$$\frac{(n_{is} + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_s + n + j_{sa} - 1)}^{(l_s + j_{sa})}$$

$$\sum_{n_i = n + j_s - j_{ik} - \mathbb{k}_1}^n \sum_{(n_i - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n - j_{ik} + 1} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

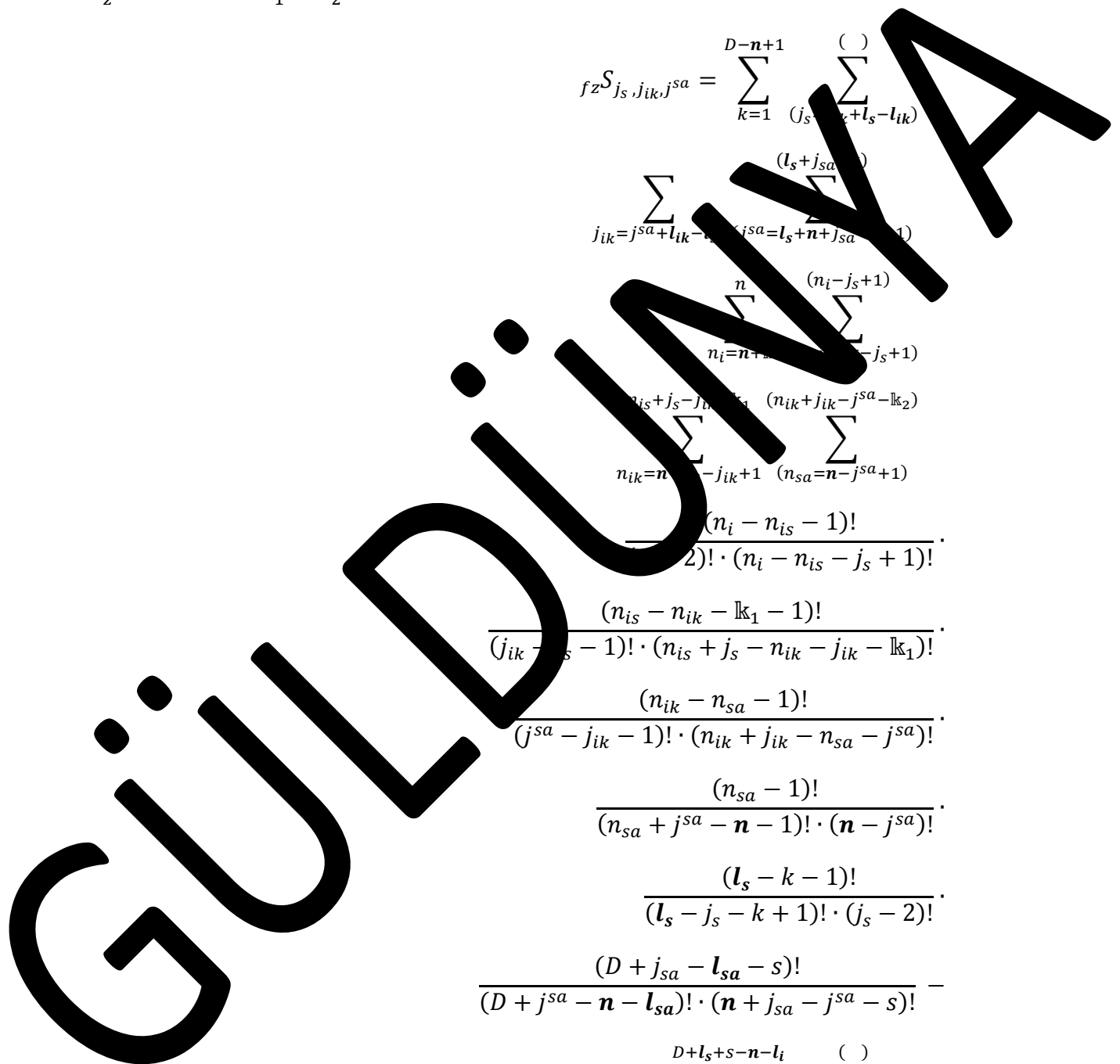
$$\frac{(n_{ik} - n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{(j^{sa} = l_i + n + j_{sa} - D - s)}^{(l_s + j_{sa} - k)}$$



$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - \dots)!}{(l_s - j_s - \dots - 1)! \cdot (\dots - 2)!}$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - \dots)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}^{ik}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge n + j_{sa} - s > \dots \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = \dots + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \dots + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - 1)!}{(l_s - j_s + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D + j_{sa} - n - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n - j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{l_s+s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_{z^s} = \sum_{j_{sa}^{ik}+1}^{D-1} \sum_{j_{sa}^{ik}}^{(j_{sa}^{ik}+l_s-l_{ik})} \binom{D-1}{j_{sa}^{ik}+l_s-l_{ik}}$$

$$\sum_{j_{sa}^{ik}+n-D}^{l_{ik}+1} \sum_{j_{sa}^{ik}+n-D}^{(j_{sa}^{ik}+l_s-l_{ik})} \binom{D-1}{j_{sa}^{ik}+n-D}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \binom{()}{j_s=j_{ik}+l_s-l_{ik}}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-k+1} \binom{()}{j^{sa}=j_{ik}+l_{sa}-l_i}$$

$$\sum_{n_i=n+k}^n \binom{(n_i-j_s+1)}{(n_i-k-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \binom{()}{n_{ik}+j_{ik}-j^{sa}}$$

$$\frac{(n_i + j_s + j_{sa} - k_1 - j^{sa})!}{(n_i - n - k_2)! \cdot (n_i + j_s + j_{sa} - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - n_i)!}{(j^{sa} + s - n - l_i - j)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s > D - n - 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa}^{ik} - j_{sa}^{ik} \leq j_{sa}^{ik} \leq n + j_{sa} - s \wedge$

$l_i - j_{sa}^{ik} + 1 \leq l_i \wedge l_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$D \geq n < n \wedge I = \mathbb{N} \setminus 0 \wedge$

$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, k_1, \dots, k_2, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge j_{sa} = s + k \wedge$

$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$

$$f^z S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-n+1} \binom{()}{j_s=j_{ik}+l_s-l_{ik}}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+l_{sa}-l_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_1)}^{(n_{ik}+j_{ik}-j_{sa}-k_1)}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-k_1)!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j_{sa})!}$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j_s-n-1)! \cdot (n-j_{sa})!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+l_s+s-n-l_i-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+l_{sa}-l_{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2)}^{(n_i-j_s+1)}$$

$$\frac{(n_i+j_s+j_{sa}-j_{sa}-s-k_1-k_2-j_{sa}^s)!}{(n_i-n-k_1-k_2)! \cdot (n+j_s+j_{sa}-j_{sa}-s-j_{sa}^s)!}$$

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$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^s j_{sa}^{ik} = \sum_{k=1}^{l_{sa}+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{sa}-k-j_{sa}+2)} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+k, l_{sa}=l_i+k-s+1)}^{(l_{sa}=k-j_{sa}+2)} \sum_{(j_{ik}=j_s+l_{ik}-l_{sa}, j_{sa}=j_{ik}+l_{sa}-l_{ik})}^{(j_s=j_s+1)} \sum_{(n+l_k, n_{is}=n+l_k-j_s+1)}^{(n_{is}=n+l_k-j_s+1)} \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_{is}=n+l_k-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \frac{(n_i + j_s + j_{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n - n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D > n - n \wedge I = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+l_{ik}}^n \sum_{(n_{is}=n+l_{ik}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{(j_{ik}+j_s-j_{sa}^{ik}+1)}^{(n_{ik}+j_{ik}-j^{sa}+1)}$$

$$\frac{(n_i - n_{is})}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - j_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} + j_s - 1)! \cdot (n_i + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+l_{ik}}^n \sum_{(n_{is}=n+l_{ik}-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge l_i + j_{sa} - s > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \dots + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - s)!}$$

$$\sum_{k=2}^{D+l_s+s-n} \sum_{i=l_s}^{(l_s-k+1)} \sum_{a=D-s+1}^{(i)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(i)} \sum_{a=j_{ik}+l_{sa}-l_{ik}}^{(i)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{(i)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(i)}$$

$$\frac{(n + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_s} \sum_{(j_{sa}=l_{sa}+n)}^{(l_{ik}+j_{sa}-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+\mathbb{k}_1}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n-j_{ik}+1}^{n_{ik}+j_s-j_{ik}} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\sum_{k=1}^{D-n+1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}-k+1}^{l_{ik}-k+1} \sum_{(j_{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{is}+j_s-j_{ik}-k_1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-k_1)}^{(n_{ik}+j_{ik}-j_{sa}^{ik}-k_1)} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)!(n_{is}-n_{ik}-j_{ik}-k_1)!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)!(n_{ik}+j_{ik}-n_{sa}-j_{sa}^{ik})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)!(n-j_{sa}^{ik})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)!(j_s-2)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa}^{ik})!}{(l_{sa}+j_{sa}^{ik}-j_{sa}^{ik}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa}^{ik})!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}^{ik}-s)!} \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+j_{sa}^{ik}-j_{sa}}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{(j_{sa}=l_i+n+j_{sa}-D-s)}^{()} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-k_2)}^{()}
 \end{aligned}$$

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$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa})!}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_s+j_{sa}-k)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_s)!} + \\
 & \sum_{j_{ik}=l_s+n-l_{sa}-k-D-1}^{l_s+j_{sa}^{ik}-l_{ik}-j_{sa}-k+1} \sum_{j_{sa}=l_s+j_{sa}-k+1}^{(j_s - k)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+\dots)^{(l_s+j_{sa}-k)} (j_{sa}=D-s)}$$

$$\sum_{i=n+kk}^n \sum_{(n_i=n+kk+1)}^{(n_i+1)}$$

$$\sum_{n_i=n_{i_s}+j_{sa}-kk_1}^{()} \sum_{(j^{sa}-kk_2)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - kk_1 - kk_2 - j_{sa})!}{(n_i - n - kk_1 - kk_2)! \cdot (n_i + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_s+n+j_{sa}^{ik}}^{j_{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j_{sa}=l_s+n-D)}^{(j_{sa}-k)}$$

$$\sum_{n_i=n+k}^{(n_i-j_s)} \sum_{n_{is}=n+k-j_s+1}^{(n_{is}-k)}$$

$$\sum_{n_{sa}=n-j_{sa}+1}^{(n_{sa}-k_1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{ik} - k_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\sum_{k=1}^{D-n+1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=l_s+n+j_{sa}^{ik}-D-1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=l_s+j_{sa}-k+1)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_{ik}+j_{ik}-j^{sa}-k_1)} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-k_1)!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_s-n-1)! \cdot (n-j^{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_s-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{()} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()}
 \end{aligned}$$

GÜLDÜZMAYA

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s)!}$$

$((D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$

$(D \geq n < n \wedge l_s > D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge s = \dots + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$f^z S_{j_s, j_{ik}, j_{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik} = l_{ik} + n - D}^{l_{sa} + n + j_{sa}^{ik} - D - j_{sa} - 1} \sum_{(j_{sa} = l_{sa} + n - D)}^{(l_{sa} - k + 1)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\begin{aligned}
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - 1)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(j_s + j_{sa} - j^{sa} - j_{sa})!}{(j_s + l_{sa} - j^{sa} - j_{sa})! \cdot (j_s + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa} - s)! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{D-\mathbf{n}+1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\
 & \sum_{j_{ik}=l_{sa}+\mathbf{n}+j_{sa}^{ik}-D-j_{sa}}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}
 \end{aligned}$$

GÜLDÜZMÜŞA

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$\sum_{k=0}^{D+l_s+s-l_{sa}} \binom{D+l_s+s-l_{sa}-k}{k} \sum_{i=0}^{l_s-l_{ik}} \binom{l_s-l_{ik}-i}{i}$$

$$\sum_{j_{ik}=l_i+n_{ik}-D-s}^{l_{ik}-k+1} \binom{l_{ik}-k+1-j_{ik}}{j_{ik}} \sum_{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \binom{l_{ik}-k+1-j_{ik}}{j_{ik}}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \binom{n_{is}+j_s-j_{ik}-k_1}{n_{ik}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \binom{n_{is}+j_s-j_{ik}-k_1}{n_{ik}}$$

$$\frac{(n + j_s + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

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$$\begin{aligned} & \sum_{k=1}^{D-1} \sum_{l_s=l_{ik}}^{()} \\ & \sum_{j_{ik}=l_s+1}^{n+j_{sa}^{ik}-j_{sa}-1} \sum_{j_{sa}^{ik}=j_{sa}-D-1}^{(l_{sa}-k+1)} \\ & \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \\ & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \end{aligned}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D-n+1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-k} \sum_{(l_{sa}+1)}^{()}$$

$$\sum_{(n_i-j_s+1)}^{()}$$

$$\sum_{(n_{ik}+j_s-k_1)}^{()}$$

$$\sum_{(n_{sa}=n-j^{sa}+1)}^{()}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

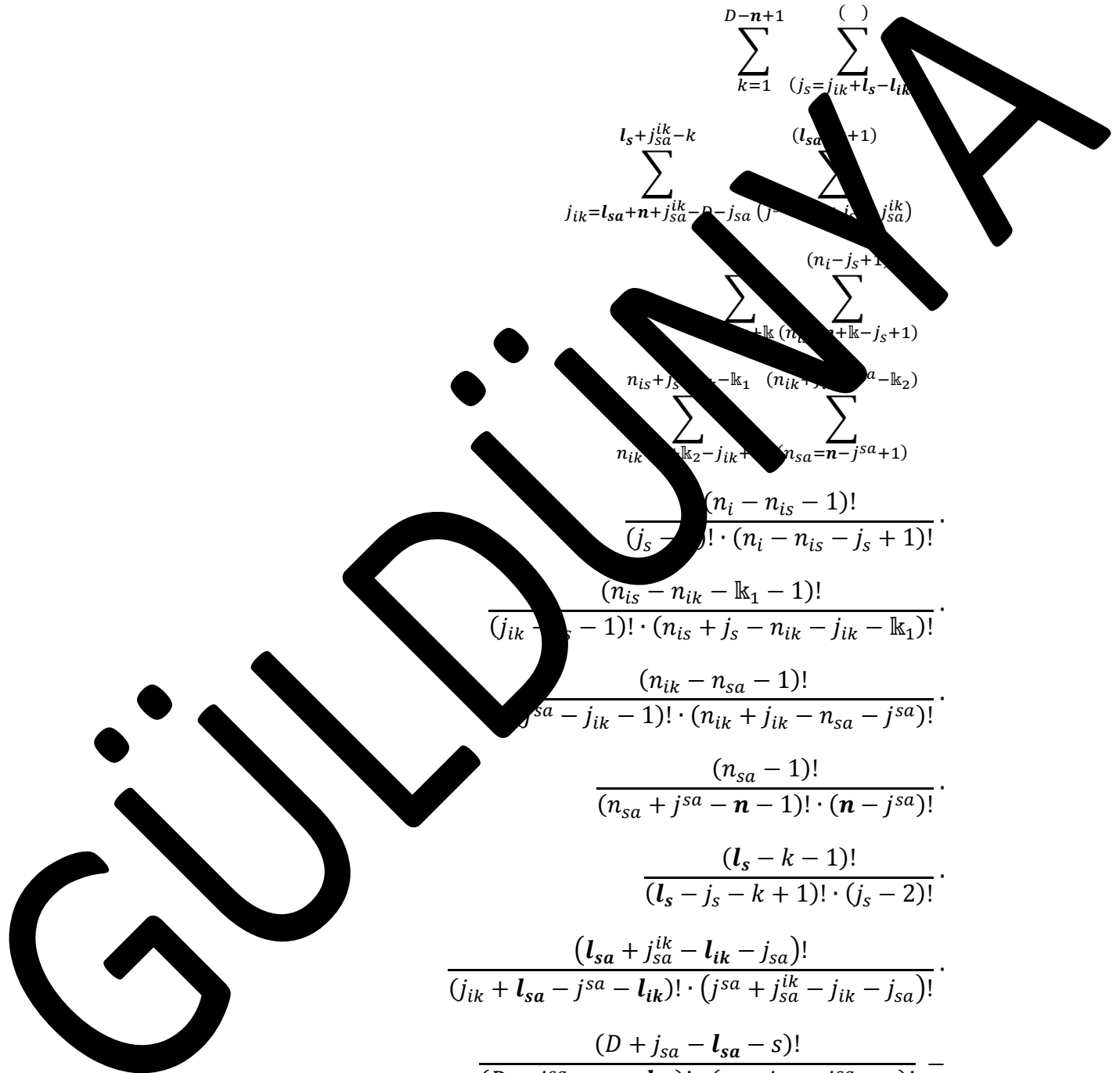
$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$



$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} ()$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{sa}-k_2)} ()$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - k_1 - j_s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s - j_{sa} - j^{sa} - s - k_1 - k_2)!} \cdot \frac{(l_s - k - 1)!}{(j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - k)!}{(D + j^{sa} + s - n - k - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa}^{ik} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$(l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa})) \wedge$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$j_{sa} \leq j_{sa}^i \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$\{j_{sa}^s, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned}
 f_z S_{j_s, j_{ik}, j^{sa}} = & \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}^{(l_{sa}+n-D-j_{sa})} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=l_{sa}+n-D-j_{sa}^{ik}+1)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}} \sum_{(n_{sa}=n-j^{sa})}^{(n_{is}+j_s-j_{ik}-l_{ik}+j_{sa}^{ik}-l_{sa}-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} + n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{D-n+1} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}-\mathbb{k}_2)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - 1)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(j_s + j_{sa} - j^{sa} - j_{sa})!}{(j_s + l_{sa} - j^{sa} - j_{sa})! \cdot (j_s + j_{sa} - j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} + l_{sa} - s)!}{(D + j_s + n - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-\mathbf{n}-l_i} \sum_{(j_s=l_i+\mathbf{n}-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - \mathbf{n} - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (\mathbf{n} + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}
 \end{aligned}$$

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$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z \mathcal{S}_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{sa}+n-D-j_{sa})} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_{sa}-k+1)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_s)!} + \\
 & \sum_{k=1}^{D-n+1} \sum_{l=1}^{(l_s-k+1)} \frac{(l_s-k+1)!}{(l_s-k+l)! \cdot (l-k)!} \cdot \frac{(l_{sa}-k+1)!}{(l_{sa}-k+l)! \cdot (l-k)!} \cdot \\
 & \sum_{j_{ik}+l_{ik}-l_s}^n \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n_i-j_s+1)} \frac{(n_i-j_s+1)!}{(n_i-n+l_k)! \cdot (n_{is}=n+l_k-j_s+1)!} \cdot \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot
 \end{aligned}$$

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$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_s+l_{ik}-l_s)}^{(j^{sa}-j_{sa}^{ik})} \sum_{(n_i=n+1)}^{(n_i+k+1)} \sum_{(n_i=n+1)}^{(n_i+k+1)} \frac{(n_i - n - k_1 - k_2)!}{(n_i - n - k_1 - k_2)! \cdot (n_i + j_s + j_{sa} - s - k_1 - k_2 - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(j_s - l_i)!}{(D + j^{sa} + \dots - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s < D - n + 1 \wedge$

$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{sa} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - j_{sa}^{ik} \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa}^{ik} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D \geq n < n - l = k > 1 \wedge$

$j_{sa} - j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s - j_{sa}^s = s + k \wedge$

$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_s+j_{sa}-k)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(j^{sa}+1)} \\
 & \frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1) \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \cdot \\
 & \frac{(n_{sa}-n_{sa}-1)!}{(j^{sa}-j_{sa}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} + \\
 & \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_s+j_{sa}-k+1)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(j^{sa}+1)}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_s - j_{sa} - 1)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_s - 1)! \cdot (j_{ik} - j_s - j_{sa} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - j_s - l_{sa})! \cdot (D + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{j_s=1}^{n + j_{sa} - n} \binom{(\quad)}{j_s = j_{ik} - j_{sa} + 1} \\
 & \sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa}} \sum_{j^{sa} = l_{sa} + n - D}^{(l_s + j_{sa} - k)} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\quad)} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s > D - n + 1 \wedge$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$\begin{aligned} & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\ & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \end{aligned}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{(n_{is}=n_{is}+1)}^{n} \sum_{(n_{is}=n_{is}+1)}$$

$$\sum_{n_{ik}=j_{ik}-k_2-j_{ik}}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}$$

$$\frac{(n_{is} - n_{is} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{is} - k_1 - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa})!}$$

$$\frac{(l_s - k - \dots)!}{(l_s - j_s - \dots - 1)! \cdot (\dots - 2)!}$$

$$\frac{(\dots)!}{(D + j^{sa} - n - l_{sa})! \cdot (n - l_{sa} - j^{sa} - \dots)}$$

$$D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge n + j_{sa} - s = \dots \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = \dots + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \dots + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{sa}+n-D-j_{sa})}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
& \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - 1)!}{(j_s - 1)! \cdot (n - j_s + 1)!} \cdot (j_s - 2)! \\
& \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa} - l_s)! \cdot (n - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa} + s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{D-n+1} \sum_{(j_s = l_{sa} + n - D - j_{sa} + 1)}^{(l_s - k + 1)} \\
& \sum_{j_{ik} = j_s + j_{sa}^{ik} - 1}^{l_{sa} + j_{sa}^{ik} - k - j_{sa} + 1} \sum_{(j^{sa} = j_{ik} + l_{sa} - l_{ik})}^{()} \\
& \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}
\end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa})!} \cdot \sum_{j_{ik} + j_{sa}^{ik} - 1 \leq j_s \leq n - j_{sa} + 1} \sum_{n_{ik} = n_{is} + j_s - j_{ik} - k_1}^n \sum_{n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2}^{(n_i - j_s + 1)} \frac{(D + j_s + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z^s} j_{sa}^{ik} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{(l_s+j_{sa}-k)}^{(j_{ik}=j^{sa}+l_{ik}-l_{sa} \quad (j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}))}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{D-n+1} \sum_{j_s=j_s+n-D}^{l_s-k+1} \frac{(l_{ik} + j_{sa} - j_s + 1)!}{(j_s + l_{ik} - l_{sa} - j_s + 1)! \cdot (l_s + j_{sa} - k + 1)!} \cdot$$

$$\sum_{j_s=j_s+1}^{n_{is} + k} \frac{(n_{is} + k - j_s + 1)!}{(n_{is} + k - j_s + 1)!} \cdot$$

$$\sum_{n_{ik}=n_{sa} - j_{ik} + 1}^{n_{is} + j_{ik} - k_1} \frac{(n_{ik} + j_{ik} - j^{sa} - k_2)!}{(n_{sa} - j^{sa} + 1)!} \cdot$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

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$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \sum_{j_{ik}=j_{sa}^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-k)} \sum_{n_i=n+k}^n \sum_{(n_{is}=l_{ik}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{(\quad)} \sum_{(n_{ik}+j_{ik}-j_{sa}^{sa})}^{(\quad)} \frac{(n_i + j_s + j_{sa} - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_2})! \cdot (n_i + j_s + j_{sa} - j_{sa}^s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - l_{k_1} + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(j_{sa}^{sa} + s - n - l_i - j_{sa}^s)! \cdot (n + j_{sa} - j_{sa}^s - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s > D - n + 1 \wedge \\ & 2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{sa} - 1 \leq j_{ik} \leq j_{sa}^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa}^{sa} - j_{sa}^{ik} \leq j_{sa}^{sa} + n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee \\ & (D > n < n \wedge l_s > D - n + 1 \wedge \\ & 2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{sa} - 1 \leq j_{ik} \leq j_{sa}^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa}^{sa} - j_{sa}^{ik} \leq j_{sa}^{sa} + n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge \\ & n > 0 \wedge I = k > 0 \wedge \\ & j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge \\ & s: \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}, \dots, j_{sa}^i\} \wedge \\ & s > 4 \wedge s = s + k \wedge \end{aligned}$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+1}^n \sum_{(n_i+j_s+1)}^{(n_i+j_s+1)}$$

$$\sum_{(n_{is}+j_s-j_{ik})}^{(n_{ik}+j_{ik}-j^{sa})} \sum_{(n_i+j_s+1)}^{(n_i+j_s+1)}$$

$$\frac{(n_i - n_{is})}{(j_s - 2) \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - j_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
 & \frac{(n_{sa} + j_s - n - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(n_{is} + l_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_s - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot
 \end{aligned}$$

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$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa}) \vee$$

$$(D \geq n < n \wedge l_s > D - n + 1 \wedge$$

$$2 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa}) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z \geq 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{D-n+1} \sum_{(j_s=l_s+n-D)}^{(l_{ik}+n-D-j_{sa}^{ik})}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{\binom{l_s - k - 1}{l_s - j_s - k + 1}}{(l_s - j_s - k + 1)! \cdot (j_s - l_s - k + 1)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_{sa} - 1)! \cdot (j_{ik} - l_{ik} - j_{sa} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{j_s=1}^{n-n+1} \sum_{j_s=l_{ik}+n-D-j_{sa}+1}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}-1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}
 \end{aligned}$$

GÜLDENWA

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{j_s=l_i+n-l_{sa}-s+1}^{(l_s-k+1)}$$

$$\sum_{j_s=j_s+j_{sa}^{ik}-1}^{(j_s+1)} \sum_{a=j_{ik}+l_{sa}-l_{ik}}^{(j_s+1)} \sum_{n_{is}=n+k}^{(j_s+1)} \sum_{n_{is}=n+k}^{(j_s+1)} \sum_{n_{is}=n+k}^{(j_s+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}^{(j_s+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}^{(j_s+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}^{(j_s+1)} \frac{(n_i + j_{sa} - j_{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

- $D \geq n \wedge l_{sa} \leq D - j_{sa} - n \wedge$
- $1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$
- $j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$
- $l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$
- $D \geq n < n \wedge I = k > 0 \wedge$
- $j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$
- $s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$
- $s > 4 \wedge s = s + k \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\quad)} \right)$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik})} \sum_{(j^{sa}=j_{sa}+1)}^{(n-j_s+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_{sa}=n-j^{sa}+1)}$$

$$\frac{(n_{is}+j_s-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-j^{sa}-1)!}{(j_{ik}-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-\mathbb{k}_1)!} \cdot \frac{(n_{is}-1)!}{(n_{is}-\mathbb{k}_1-1)!}$$

$$\frac{(n_{ik}+j_{ik}-n_{sa}-1)!}{(j_{ik}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +$$

$$\sum_{k=1}^{l-1} \sum_{(j_s=1)}^{(\quad)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa}=j_{sa})}^{(\quad)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

GÜLDENWA

$$\begin{aligned}
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(D + j_{sa} - \mathbf{l}_{sa} - 1)!}{(D + j_{sa} - \mathbf{n} - \mathbf{l}_{sa})! \cdot (\mathbf{l}_{sa} - s)!} \cdot \\
 & \sum_{j_s=1}^{\mathbf{l}_{sa}} \sum_{j_{ik}=j_{sa}^{ik}}^{\mathbf{l}_{sa} - j_{ik} - \mathbb{k}_1} \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{n_{is}=\mathbf{n}+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{(n_{sa} - j_s - k + 1)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(\mathbf{l}_s - k - 1)!}{(\mathbf{l}_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(\mathbf{l}_{sa} + j_{sa}^{ik} - \mathbf{l}_{ik} - j_{sa})!}{(j_{ik} + \mathbf{l}_{sa} - j^{sa} - \mathbf{l}_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}
 \end{aligned}$$

GÜLDÜZYA

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=l_{ik}+j_{sa}^{ik}-j_{sa}^{ik}+2)}^{(l_{sa}-k+1)}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_k+1)}^{(n_{is}+1)}$$

$$\sum_{n_{ik}=n_{sa}^{ik}-j_{ik}+1}^{n_{ik}+j_s-j_{ik}-k_1} \sum_{(j_{ik}+j_{ik}-j^{sa}-k_2)}^{(j^{sa}+1)}$$

$$\frac{(n_{is}-1)!}{(j_{ik}-1)! \cdot (n_{is}-j_s+1)!}$$

$$\frac{(n_{is}-1-k_1-1)!}{(j_{ik}-1)! \cdot (n_{ik}+j_s-n_{ik}-j_{ik}-k_1)!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j_{ik}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=i^l}^{()} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i^{l+1})} \sum_{(j^{sa}=j_{sa}+1)}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_{ik}-\mathbb{k}_1+1) \\ (n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}} \sum_{\substack{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2 \\ n_{sa}=n-j^{sa}+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_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - l_{ik})!} \cdot \\
 & \left(\frac{(D - l_{sa} - s)!}{(D - j^{sa} - n - l_{sa} - s)! \cdot (n + j^{sa} - s)!} \right) \cdot \\
 & \sum_{k=1}^{i^{l-1}} \sum_{\substack{(\) \\ (j_s=j_{ik}+l_s-l_{ik})}} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{\substack{(l_s+j_{sa}-k) \\ (j^{sa}=j_{sa}+1)}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+\mathbb{k}-j_s+1)}} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\substack{(\) \\ (n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{i^l} \sum_{\substack{(\) \\ (j_s=1)}}
 \end{aligned}$$

GÜLDÜNYA

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum^{()}_{(j^{sa}=j_{sa})}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum^{()}_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)}{(D + s - l_i)! (n - s)!}$$

$$D \geq n < n \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + \dots \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge \dots \wedge j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z \dots 2 \wedge \mathbb{k} = \mathbb{k}_1 \dots \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{i-1} \sum^{()}_{(j_s=j_{ik}+l_s-l_{ik})} \right)$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum^{(l_s+j_{sa}-k)}_{(j^{sa}=j_{sa}+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum^{(n_i-j_s+1)}_{(n_{is}=n+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{is}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}_{(n_{sa}=n-j^{sa}+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{\binom{l_s - k - 1}{l_s - k + 1}}{(l_s - k - 1)! \cdot (l_s - 2)!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{i-1} \sum_{j_s=1}^{(i-k)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{j^{sa}=j_{sa}}$$

$$\sum_{i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \Bigg) +$$

$$\left(\sum_{k=1}^{i-1} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{(i-k)} \right)$$

GÜLDÜMNA

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{j_{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j_{sa}=j_{sa}+2)}^{(l_s+j_{sa}-k)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_1)} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}-1)!} \cdot \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-j_s-1)!(n_i-n_{ik}-j_{ik}-\mathbb{k}_1)!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)!(n_i+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_s-n-1)!(n-j_{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)!(j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{+l_{sa}-j_{sa}-l_{ik})! \cdot (j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} + \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=l_s+j_{sa}-k+1)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - i - 1)!}{(j_s - i - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(j_{ik} + j_{sa}^{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - j_{sa})! \cdot (j^{sa} - j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=i}^{\binom{D}{i}} \sum_{(j_s=1)}^{\binom{D}{i}} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j^{sa}=j_{sa}+1)} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!}
 \end{aligned}$$

GÜLDÜZMÜŞA

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} -$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_{sa}-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}+j_{sa}^{ik}-j_{sa}-l_{ik}+1}^{(j_{sa}-k)}$$

$$\sum_{(n_i-j_s+1)}^{()}$$

$$\sum_{n_{ik}=n_{is}+j_{sa}-l_{k_1}}^{()} \sum_{(n_{sa}+j_{ik}-j_{sa}-l_{k_2})}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j_{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j_{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j_{sa} - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{(j_{sa}=j_{sa})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2}}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j_{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j_{sa} - s - j_{sa}^s)!}$$

GÜLDENWA

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}} = \sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{k-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^l} \sum_{(j_s=l_{ik})}^{(j_s=l_{ik}+1)} \sum_{(j_s=j_{sa})}^{(j_s=j_{sa}+1)} \sum_{n_i=n+l_{ik}}^n \sum_{n_{ik}=n+l_{ik_1}}^{(n_i-j_{ik}-l_{ik_1})} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}+j_{ik}-j^{sa})} \frac{(n_i - j_{ik} - l_{ik_1})!}{(j_{ik} - 1)! \cdot (n_i - j_{ik} - j_{ik} - l_{ik_1} + 1)!} \cdot \frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} +$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} +$$

$$\left(\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(j_s=j_{ik}+l_s-l_{ik}+1)} \right)$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{(l_{sa}-k+1)}$$

$$\sum_{n_i=n+l_{ik}}^n \sum_{(n_{is}=n+l_{ik}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{ik_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{ik_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{ik_2})}$$

GÜLDENWALD

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (l_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{sa})! \cdot (j^{sa} + j_{sa} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{(\cdot)} \sum_{i=1}^{(\cdot)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa} - i + 1)} \sum_{(j^{sa}=j_{sa}+1)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=1}^{i^l-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(\cdot)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n_{ik}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{ik}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\cdot)} \\
 & \frac{(n_i+j_s+j_{sa}-j_{sa}^{ik}-\mathbb{k}_1-\mathbb{k}_2-j_{sa}^s)!}{(n_i-n-\mathbb{k}_1-\mathbb{k}_2)! \cdot (n+j_s+j_{sa}-j^{sa}-j_{sa}^s)!} \\
 & \frac{(n_i-j_s+1-k-1)!}{(n_i-j_s+1)! \cdot (j_s-2)!} \\
 & \frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n+j_{sa}-j^{sa}-s)!} \\
 & \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{(\cdot)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{(\cdot)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\cdot)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i+j_s+j_{sa}-j^{sa}-s-\mathbb{k}_1-\mathbb{k}_2-j_{sa}^s)!}{(n_i-n-\mathbb{k}_1-\mathbb{k}_2)! \cdot (n+j_s+j_{sa}-j^{sa}-s-j_{sa}^s)!} \\
 & \frac{(D-l_i)!}{(D+s-n-l_i)! \cdot (n-s)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}} = \binom{l-1}{k} \sum_{k=1}^{l-1} \binom{l-1}{j_s=j_{ik}+k} \binom{l+j_{sa}^{ik}-k}{j_{sa}^{ik}+1} \binom{l-1}{j_{sa}=j_{sa}^{ik}-j_{sa}} \sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_{ik}-k_1} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

GÜLDÜZÜMÜYA

$$\begin{aligned}
 & \sum_{k=1}^i \sum_{(j_s=1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{(j_{sa}=j)}^{()} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-1)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\
 & \left. \frac{(n_{sa} + j_{sa} - n - s)!}{(D + j_{sa}) \cdot (n - l_{sa})! \cdot (n - s)!} \right) + \\
 & \left(\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right. \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \left. \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \right)
 \end{aligned}$$

GÜLDENWA

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{j_s=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa} - i_{l+1})} \sum_{(j^{sa}=j_{sa}+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{(n_i - l_{k_1} + 1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}}$$

$$\frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{k_1} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \Bigg) -$$

$$\sum_{k=1}^{i_{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

GÜLDÜZYAN

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-k_2)}^{()} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - k_1 - j_s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_s)!} \cdot \\
 & \frac{(l_s - k + 1)!}{(j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(D - l_i)!}{(D + j^{sa} + s - n - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \\
 & \sum_{k=i}^{()} \sum_{(j_s=1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()} \\
 & \sum_{n_i=n+k} \sum_{(n_{ik}=n_i-j_{ik}-k_1+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
 \end{aligned}$$

$D \geq n < n \wedge l_{sa} \leq D + j_{sa} - n \wedge$

$1 - j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$

$D \geq n < n \wedge l = k > 0 \wedge$

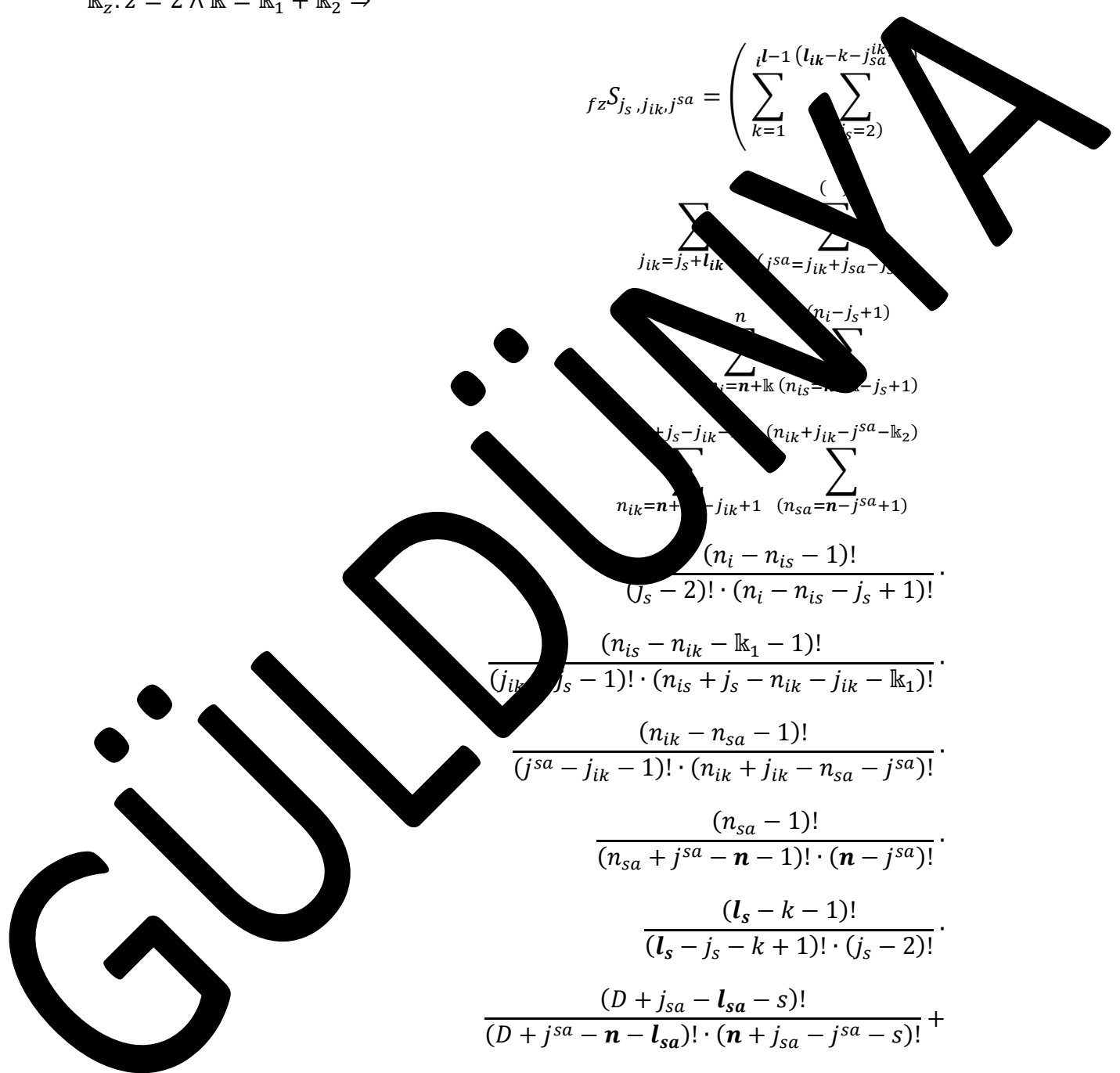
$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j_{sa}} = \left(\sum_{k=1}^{i-1} \sum_{s=2}^{(l_{ik}-k-j_{sa}^{ik})} \binom{i-1}{k} \binom{l_{ik}-k-j_{sa}^{ik}}{s} \right) \cdot \sum_{j_{ik}=j_s+l_{ik}}^n \sum_{j_{sa}=j_{ik}+j_{sa}-j_s}^{(n_i-j_s+1)} \binom{n}{j_{ik}} \binom{n_i-j_s+1}{j_{sa}-j_{ik}} \cdot \sum_{n_{ik}=n+j_{ik}-j_{sa}+1}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \binom{n_i-n_{is}-1}{j_{sa}-j_{ik}-1} \cdot \frac{(n_{is}-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-\mathbb{k}_1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} + \sum_{k=1}^{(i)} \sum_{l=(j_s=1)}$$



$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
 & \frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{k_1} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \left(\frac{(n_{sa} + j^{sa} - l_{sa} - 1)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - l_{sa})!} \right) + \\
 & \left(\sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \right) \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_{sa}-k+1)} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot
 \end{aligned}$$

GÜLDÜNYA

$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{(l_s - k + 1)} \sum_{(j_s=2)}^{(j_s=1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(j_{sa}=j_{sa}+1)} \\
 & \sum_{n_i=n+l_k}^{(n_i=n+l_k-1)} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{sa}=n-j^{sa}+1)} \\
 & \frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(n_i - n_{ik} - j_{ik} - l_{k_1} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_{is}=n+l_k-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=i}^n \sum_{\binom{()}{j_s=1}} \sum_{\binom{()}{j_{ik}=j_{sa}^{ik} (j^{sa}=j_{sa})}} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

- $D \geq n < n \wedge l_s \leq D + j_s - n \wedge$
- $1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$
- $j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge$
- $l_{ik} - \mathbb{k}_1 + 1 = j_s + j_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$
- $D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$
- $1 \leq j_s \leq j_{sa} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$
- $s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$
- $s > 4 \wedge s = s + \mathbb{k} \wedge$
- $\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \right)$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n-l_s-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-l_s-k_2)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}} \sum_{(n_{sa}=n-j^{sa}+1)}$$

$$\frac{(n_{is}-1)!}{(j_s-1)! \cdot (n_i-j_s+1)!}$$

$$\frac{(n_{ik}-1)!}{(n_{is}+j_s-j_{ik}-k_1)!}$$

$$\frac{(n_{ik}-1)! \cdot (n_{sa}-1)!}{(j^{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +$$

$$\sum_{k=1}^{(i^l)} \sum_{(j_s=1)}^{(i^l)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+k_2-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2}$$

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$$\begin{aligned}
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j_{sa} - n - l_{sa})! \cdot (l_{sa} - s)!} \cdot \\
& \left(\sum_{k=1}^{l-1} \sum_{j_s=0}^{n-k+1} \frac{(l-1-k+1)!}{(n-k+1)!} \right) \\
& \sum_{i_{ik}=j_s+l_{ik}}^n \sum_{i_s=n+l_{ik}}^n \frac{(n_i - j_s + 1)!}{(n_{is} = n + l_{ik} - j_s + 1)!} \cdot \\
& \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot
\end{aligned}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^i \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa} - i^{l-1})} \sum_{(j_s=j_{sa}+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}+1)}^{(n_i - j_{ik} - l_{k_1} + 1)} \sum_{n_{sa}=n-j_{sa} - l_{k_2}}^{n_{ik} + j_{ik} - j^{sa} - l_{k_2}}$$

$$\frac{(n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 2)! \cdot (n_i - j_{ik} - l_{k_1} + 1)!}$$

$$\frac{(n_{ik} - j_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(n_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s - k + 1)}$$

$$\sum_{j_{ik}=j_s + l_{ik} - l_s}^{()} \sum_{(j^{sa}=j_{ik} + j_{sa} - j_{sa}^{ik})}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik}=n_{is} + j_s - j_{ik} - l_{k_1}}^{()} \sum_{(n_{sa}=n_{ik} + j_{ik} - j^{sa} - l_{k_2})}$$

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$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\sum_{k=1}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)} \sum_{j_{sa}^{ik} (j^{sa}=j_{sa})}^{(\cdot)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik} = j_{ik} - \mathbb{k}_1 + j_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\cdot)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq n_i - j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} - j_{sa} \leq n - j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge j_{sa}^{ik} + j_{sa} > l_{ik} \wedge$

$j_{sa}^{ik} + j_{sa} < l_{sa} \leq D - l_s + j_{sa} - n - 1 \wedge$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$\{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$\begin{aligned}
 f_{z^S} S_{j_s, j_{ik}, j^{sa}} = & \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right. \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{(j^{sa}=l_{sa}+n-D)}^{(n_i-j_s+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{is}+j_s-j_{ik}-k_1}^{(n_{is}+j_s-j_{ik}-k_1)} \sum_{(j_{ik}-j_s-k_2)}^{(j_{ik}-j_s-k_2)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}}^{(n_{ik}=n+k_2-j_{ik})} \sum_{(n_{sa}=n-j^{sa}+j_{sa})}^{(n_{sa}=n-j^{sa}+j_{sa})} \\
 & \frac{(n_{sa}-n_{is}-1)!}{(j_s-2)! \cdot (n_{is}+j_s+1)!} \cdot \\
 & \frac{(n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \left. \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \right) + \\
 & \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \right. \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - 1)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(j_{ik} + j_{sa}^{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - j_{sa})! \cdot (j^{sa} - j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{l_s + j_{sa} - n - l_{sa}} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()} \\
 & \sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik} - k + 1} \sum_{(j^{sa} = l_{ik} + j_{sa} - k - j_{sa}^{ik} + 2)}^{(l_{sa} - k + 1)} \\
 & \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_s)!} + \\
& \sum_{k=D+l_s}^{l-1} \sum_{i_s=n-l_{sa}}^{n-l_{sa}-k} \sum_{i_s=l_{ik}}^{n-l_{sa}-k} \sum_{j_{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot
\end{aligned}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{i=1}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j_{sa}=n-D)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{n_{sa}=n-j_{sa}-k_2}^{(n_{ik}+j_{ik}-j_{sa}-k_2)}$$

$$\frac{(j_{ik}-2)! \cdot (n_i - j_{ik} - k_1 + 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(n_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-k)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()}$$

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$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa})!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$f_z S_{n_i, j_{sa}}^{j_{ik}, j^{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{()}{(j_s=j_{ik}+l_s-l_{ik})} \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_s+j_{sa}-k)} \sum_{j_{sa}^s=l_{sa}+n-D}^{(l_s+j_{sa}-k)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \right)$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \left(\sum_{k=0}^{D+l_s+j_{sa}-j_{ik}-j_{sa}-1} \binom{D+l_s+j_{sa}-j_{ik}-j_{sa}-1}{k} \binom{l_s+j_{sa}-k}{j_s=j_{ik}+l_s} \right) \cdot \\
& \sum_{j_{ik}=j_{sa}+1}^{n_{ik}-j_{sa}-1} \sum_{j_{is}=j_{ik}+1}^{n_{is}+j_{sa}-k} \binom{n_{ik}-j_{sa}-1}{j_{ik}} \binom{l_s+j_{sa}-k}{j_s=j_{ik}+l_s} \cdot \\
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{ik}-k_1} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \binom{n_i-j_s+1}{n_i=n+k_1} \binom{n_{is}-n+k_1-j_s+1}{n_{is}=n+k_2-j_{ik}+1} \cdot \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
\end{aligned}$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{(\quad)}{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \binom{(l_{sa}-k+1)}{(j^{sa}=l_s+j_{sa}-k+1)}$$

$$\sum_{n_i=n+l_k}^n \binom{(n_i-j_s+1)}{(n_{is}=n+l_k-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik_1}}^{n_{is}+j_s-j_{ik_1}-l_{k_1}+j_{ik_1}-l_{k_2}} \binom{(n_{sa}-j^{sa}+1)}{(n_{sa}=n-j^{sa}+1)}$$

$$\frac{(n_i - n_{ik} - 1)!}{(j_s - 2)! \cdot (n_{is} + j_s + 1)!}$$

$$\frac{(n_{ik} - n_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \binom{(\quad)}{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \binom{(l_{sa}-k+1)}{(j^{sa}=l_{sa}+n-D)}$$

GÜLDÜZYA

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} + j^{sa} - n - 1)!}{(n_{sa} - n - 1)! \cdot (j^{sa} - 1)!} \cdot \\
 & \frac{(n - j_s - n + 1)! \cdot (j_s - 2)!}{(n - j_s - n + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik})! \cdot (l_{ik} - j_{sa})!}{(j_{ik} - l_{sa} - j_{sa}^{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=i}^{\binom{(\cdot)}{i}} \sum_{(j_s=1)}^{\binom{(\cdot)}{i}} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-i+1)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}
 \end{aligned}$$

GÜLDENSA

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \sum_{k=0}^{D+l_s+s-n-l_i} \sum_{j_s=j_{ik}-l_{ik}}^{(j_s+l_s)} \sum_{j_{ik}=j_{ik}-j_{sa}}^{(j_{ik}+n+j_{sa}-D-s)} \sum_{j_s=0}^{(j_s+1)} \sum_{n_{is}=n+k-j_s+1}^{(n_{is}+k)} \sum_{k_1=0}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \sum_{k_2=0}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \frac{(n_i + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(n + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n - 1 \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - l_{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

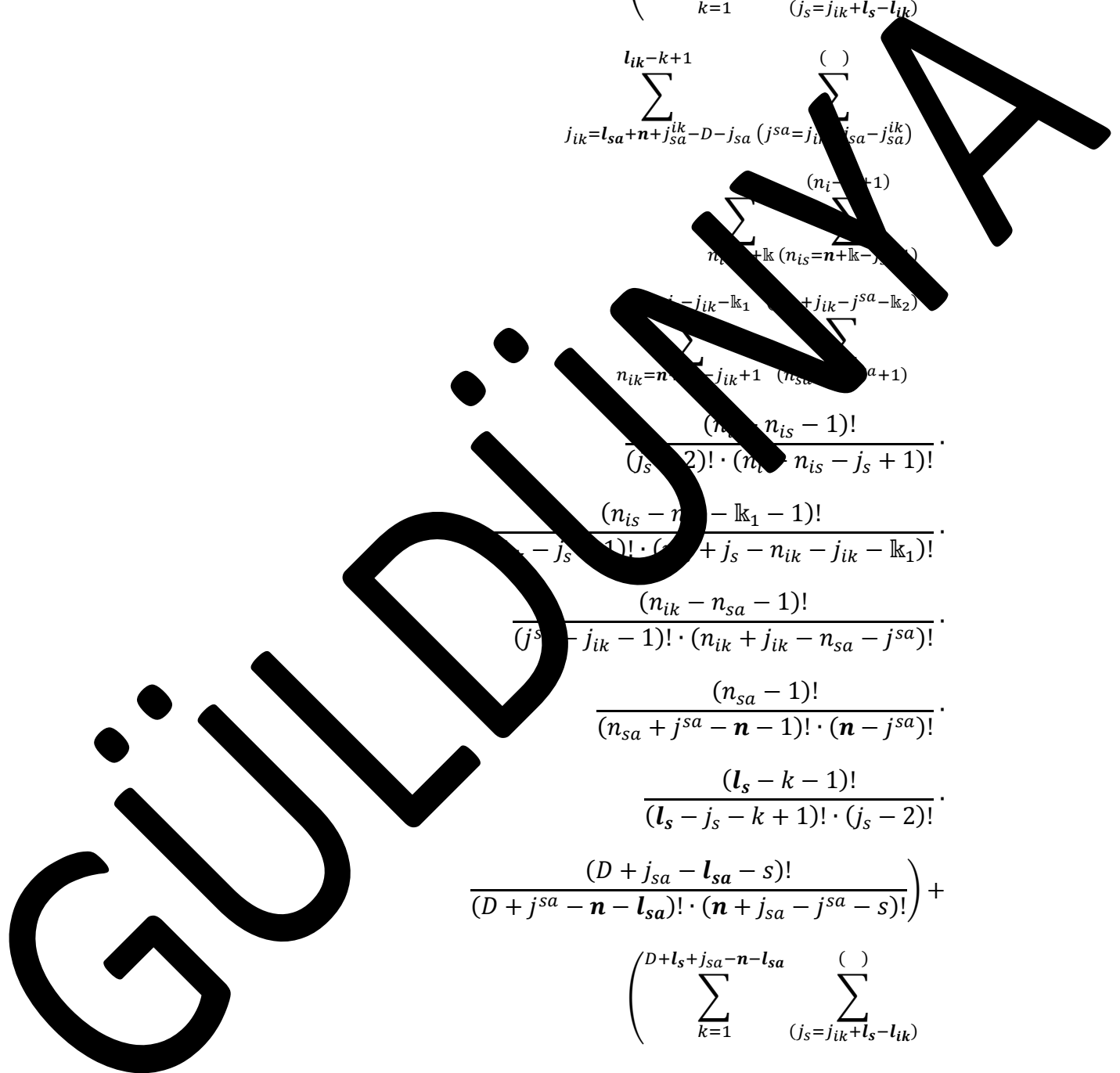
$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$s > 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \frac{(n_{is}-n_{ik}+l_{ik})!}{(n_{is}+n_{ik}-j_s)!} \frac{(n_{ik}-j_{ik}-\mathbb{k}_1)!}{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)!} \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!} \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} \right) + \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)}^{(l_{sa}-k+1)} \right)$$



$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} + j_s - n - 1)!}{(n_{sa} + j_s - n - 1)! \cdot (j_s - 1)!} \cdot \\
 & \frac{(n - j_s - n_{sa} - 1)!}{(n - j_s - n_{sa} - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} - l_{sa} - j_{sa}^{ik} - l_{ik} - j_{sa})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot
 \end{aligned}$$

GÜLDÜSMEYA

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (l_{sa} + j_{sa}^{lk} - j_{sa} - l_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=D+1}^{j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{l=1}^{()}$$

$$(l_{sa} - l + 1)$$

$$\sum_{i_{ik}=j_{sa}^{ik}}^{()} (j_{sa} - D)$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k+l_{k2}-j_{ik})}^{(n_i-j_{ik}-l_{k1}+n_{ik}+j_{ik}-j_{sa})} \sum_{(n_{sa}=n+l_k+l_{k2}-j_{sa}+1)}^{(n_{sa}+j_{sa}-j_{sa}+1)}$$

$$\frac{(n_i - l_{k1} - 1)!}{(j_{ik} - l_{k1} - 1)! \cdot (n_i - l_{k1} - j_{ik} - l_{k1} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j_{sa} - l_{ik})! \cdot (j_{sa} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

GÜLDÜZMAYA

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \dots)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - \dots - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge$

$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} < j_{sa}^i - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge s = s + \dots \wedge$

$\mathbb{k}_z: z = 2 \wedge \dots = \mathbb{k}_1 + \dots \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})} \right)$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j^{sa} - n - l_{sa} - 1)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \sum_{k=1}^{D + j_{sa} - n - l_{sa}} \sum_{(j_s = j_{ik} + l_s - l_{ik})} \sum_{j_{ik} = l_{sa}}^{l_s + j_{sa}^{ik} - k} \sum_{(l_{sa} - k + 1)}^{(l_{sa} - k + 1)} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^n \sum_{(n_{is} = n + \mathbb{k}_1 - j_s + 1)}^{(n_i - j_s + 1)} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

GÜLDÜZMAYA

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{(\quad)}{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j_{ik}^{k+1}}^{l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1} \binom{(l_s-k+1)}{(j_{sa}^{ik}-D)}$$

$$\sum_{k_1}^{(n_i-j_s+1)} \sum_{k_2}^{(n_i-j_s+1)+k_1}$$

$$\sum_{n_{ik}^{k_2}-j_{ik}^{k_2}}^{n_{is}+j_{sa}^{k_2}-k_1} \binom{(n_{ik}^{k_2}-j_{sa}-k_2)}{(n_{sa}=n-j^{sa}+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \binom{(\quad)}{(j_s=j_{ik}+l_s-l_{ik})}$$

GÜLDÜZÜMÜSÜ

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_{sa})}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_1)} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \\
 & \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-k_1)!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j^{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_s-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} + \\
 & \sum_{k=i}^{()} \sum_{(j_s=1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j^{sa}=l_{sa}+n-D)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_2} \\
 & \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-k_1+1)!}
 \end{aligned}$$

GÜLDÜZMAYA

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa} - l_{ik})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \\
& \sum_{k=0}^{D+l_s+s} \sum_{j_s=j_{ik}+l_s-k}^{n-l_s-k} \binom{n-l_s-k}{j_s} \binom{n-l_s-k}{j_s} \\
& \sum_{n_i=n+k}^{n-l_s-k} \sum_{n_{is}=n+k-j_s+1}^{n-l_s-k} \binom{n-l_s-k}{n_i} \binom{n-l_s-k}{n_{is}} \\
& \sum_{j_{ik}=n_{is}+j_s-j_{ik}-k_1}^{n-l_s-k} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}^{n-l_s-k} \binom{n-l_s-k}{j_{ik}} \binom{n-l_s-k}{n_{sa}} \\
& \frac{(j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n_{is} - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D > n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

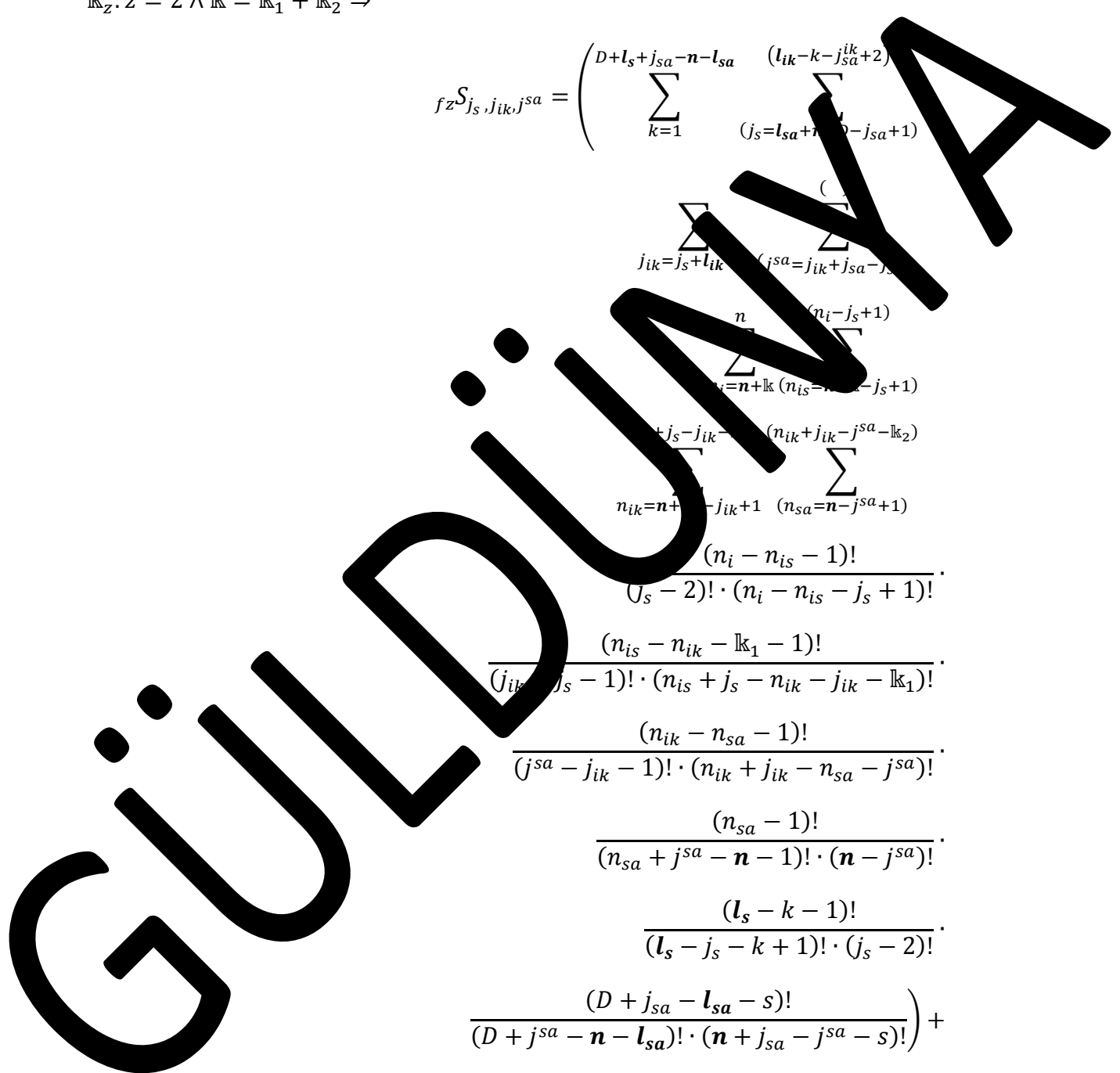
$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z \mathcal{S}_{j_s, j_{ik}, j_{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \sum_{j_{ik}=j_s+l_{ik}}^{(n)} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_s)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+l_{ik}-j_{ik}+1}^{n} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_i-n_{is}-1)!} \frac{(n_{is}-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-\mathbb{k}_1)!} \cdot \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j_{sa})!} \cdot \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})! \cdot (n+j_{sa}-j_{sa}-s)!} \right) + \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \right)$$



$$\begin{aligned}
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(l_{sa}-k+1)}^{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i=n+k-j_s+1)} \\
 & \sum_{n_{is}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_1)} \\
 & \frac{(n_i-1)!}{(j_s-2)!(n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)!(n_{is}-n_{ik}-j_{ik}-k_1)!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j_{sa}-j_{ik}-1)!(n_{ik}+j_{ik}-n_{sa}-j_{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)!(n-j_{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)!(j_s-2)!} \cdot \frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(l_{sa}+l_{ik}-j_{sa}-l_{ik})!(j_{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j_{sa}-n-l_{sa})!(n+j_{sa}-j_{sa}-s)!} + \\
 & \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(l_{sa}-k+1)}^{(j_{sa}=l_{sa}+n-D)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_i-j_s+1)}^{(n_i=n+k-j_s+1)} \\
 & \sum_{n_{is}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (l_s - k - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa})! \cdot (j_{sa} + j_{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=D+l_s+1}^{l-1} \sum_{j_s=2}^{l_{ik}-k-j_{sa}^{ik}+2} \frac{(l_{ik}-k-j_{sa}^{ik}+2)!}{(j_s - 2)!} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{j^{sa}=l_{sa}+n-D}^{l_{sa}-k+1} \frac{(l_{sa}-k+1)!}{(j_s - 2)!} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \frac{(n_i - j_s + 1)!}{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1} \sum_{n_{sa}=n-j^{sa}+1} \frac{(n_{is} + j_s - j_{ik} - \mathbb{k}_1 - 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!}{(n_i - n_{is} - 1)!} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{(l_s)} \sum_{(j_s=1)}^{(l_s)} \sum_{(l_{sa})}^{(l_s)} \sum_{(j_{sa}^{ik})}^{(l_s)} \sum_{(j_{sa}^{ik})}^{(l_s)} \sum_{(j_{sa}^{ik})}^{(l_s)} \sum_{(j_{sa}^{ik})}^{(l_s)} \sum_{(j_{sa}^{ik})}^{(l_s)} \sum_{(j_{sa}^{ik})}^{(l_s)} \\
 & \sum_{n_i=n+k}^{(n_i=n+k)} \sum_{(n_i=n+k)}^{(n_i=n+k)} \sum_{(n_i=n+k)}^{(n_i=n+k)} \sum_{(n_i=n+k)}^{(n_i=n+k)} \sum_{(n_i=n+k)}^{(n_i=n+k)} \sum_{(n_i=n+k)}^{(n_i=n+k)} \sum_{(n_i=n+k)}^{(n_i=n+k)} \sum_{(n_i=n+k)}^{(n_i=n+k)} \\
 & \frac{(n_i - n_{ik} - k_1 - 1)!}{(n_i - n_{ik} - j_{ik} - k_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(n)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa} < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + 1 \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + 1 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \right)$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \binom{(\quad)}{\quad}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j^{sa} - n - 1)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{i=1}^{(D+l_s+j_{sa}-l_{sa})} \sum_{k=1}^{(l_{sa}+n-D-j_{sa}+1)} \sum_{l=1}^{(l_{sa}-k+1)} \sum_{m=1}^{(n_{ik}-l_s)} (j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}+1) \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

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$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$D+l_s+j_{sa}-n-l_{sa} \sum_{k=1}^{l_{sa}+n-D-j_{sa}}$$

$$\sum_{(j_s=2)}^{(l_s-k+1)}$$

$$(l_s-k+1)$$

$$\sum_{j_{ik}=j_s+l_{ik}-j_{sa}}^{(l_{sa}-l_{sa}-D)}$$

$$(n_i-j_s+1)$$

$$\sum_{n+l_k}^{(n+l_k-j_s+1)}$$

$$n_{is}+j_{ik}-l_{k_1} \sum_{(n_{ik})}^{(n_{ik}-l_{k_2})}$$

$$\sum_{n_{ik}+l_{k_2}-j_{ik}}^{(n_{sa}=n-j^{sa}+1)}$$

$$(n_i - n_{is} - 1)!$$

$$(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!$$

$$(n_{is} - n_{ik} - l_{k_1} - 1)!$$

$$(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!$$

$$(n_{ik} - n_{sa} - 1)!$$

$$(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!$$

$$(n_{sa} - 1)!$$

$$(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!$$

$$(l_s - k - 1)!$$

$$(l_s - j_s - k + 1)! \cdot (j_s - 2)!$$

$$(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!$$

$$(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!$$

$$(D + j_{sa} - l_{sa} - s)!$$

$$(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)! +$$

$$i^{l-1}$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}}$$

$$(l_s-k+1)$$

$$\sum_{(j_s=2)}^{(l_s-k+1)}$$

$$k=D+l_s+j_{sa}-n-l_{sa}+1 \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_1})}$$

$$\frac{(n_i - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (j_s - n_{is} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{ik} + l_{k_2} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=i}^{(\cdot)} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-i+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}}$$

$$\frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{k_1} + 1)!}$$

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$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \sum_{k=1}^{D+l_s+s-n} \sum_{j_s=l_i+n-D-s}^{(l_s-k)} \binom{()}{j_{ik}=j_s+l_s-l_s} \binom{()}{j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)} \sum_{j_{ik}=n_{is}+j_s-j_{ik}-k_1}^{() } \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \frac{(n_i - n_{i_1} - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n_{i_1} - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D > n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} + j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

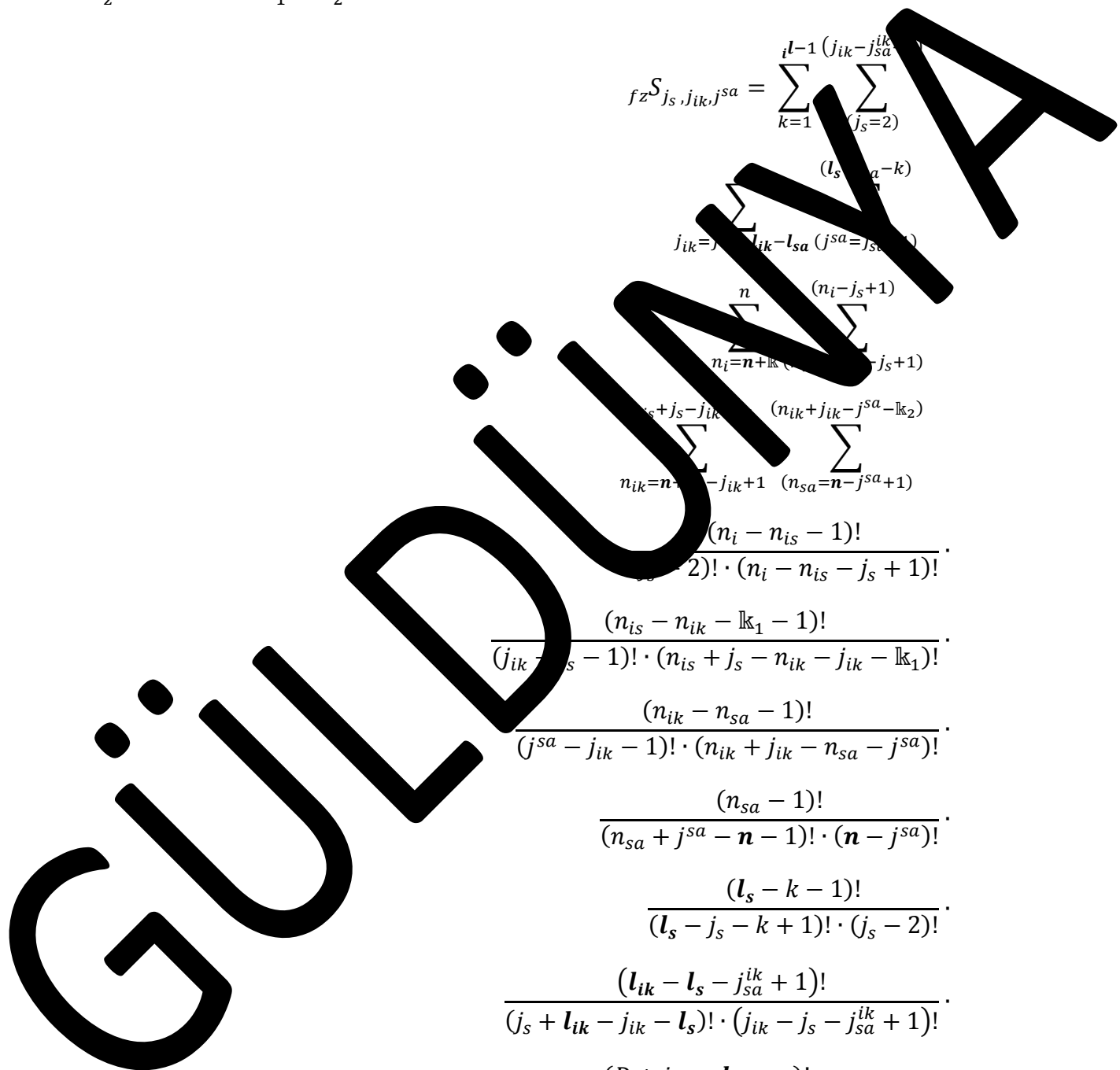
$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik})} \sum_{j_s=2}^{(j_s - a - k)} \sum_{j_{ik}=j_s}^{n_{ik} - l_{sa} (j_{sa} = j_{sa}^{ik})} \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n_{ik}+j_s-j_{ik}}^{(n_i - j_s + 1)} \sum_{n_{ik}=n_{is}-j_{ik}+1}^{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)} \sum_{n_{sa}=n-j_{sa}+1}^{(n_i - n_{is} - 1)!} \frac{(n_i - n_{is} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{j_s=2}^{(j_s - a - k)}$$



$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_s+j_{sa}-k+1)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \\
 & \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-k_1)!} \cdot \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \\
 & \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j^{sa})!} \cdot \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \cdot \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} + \\
 & \sum_{k=i}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa})}^{(l_{sa}-i^{l+1})} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{n_{ik}+j_{ik}-j^{sa}-k_2} \\
 & \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-k_1+1)!}
 \end{aligned}$$

GÜLDÜZ

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{j_s = j_{ik} - j_{sa}^{ik} + 1}^{(l_s + j_{sa} - k)}$$

$$\sum_{j_{ik} = j^{sa} + l_{ik} - l_{sa} - (j^{sa} - j_{sa} + 1)}^{(n - j_s + 1)}$$

$$\sum_{n_i = n + k}^{(n_i - n + k - j_s + 1)}$$

$$\sum_{j_{ik} = n_{is} + j_s - j_{ik} - k_1}^{(n_{sa} = n_{ik} + j_{ik} - j^{sa} - k_2)}$$

$$\frac{(n_i - n - j_s - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}{(n_i - n - j_s - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot$$

$$\sum_{k=1}^{()} \sum_{l=1}^{()}$$

$$\sum_{j_{ik} = j_{sa}^{ik}}^{()} \sum_{j^{sa} = j_{sa}}^{()}$$

GÜLDÜNYA

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1}} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\}$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_{z^S}^{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{l-1} \sum_{\binom{()}{j_s=2}}^{j_{ik}-j_{sa}^{ik}+1}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{()}{n_{is}=n+\mathbb{k}-j_s+1}}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_{sa}=n-j^{sa}+1}}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\begin{aligned}
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_s - 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j^{sa} - n_{sa} - 1)! \cdot (n + j_s - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{l_s - k + 1} \sum_{(j_s=2)}^{l_s - k + 1} \\
 & \sum_{n_i = n + \mathbb{k}_k}^n \sum_{(n_{is} = n + \mathbb{k}_k - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

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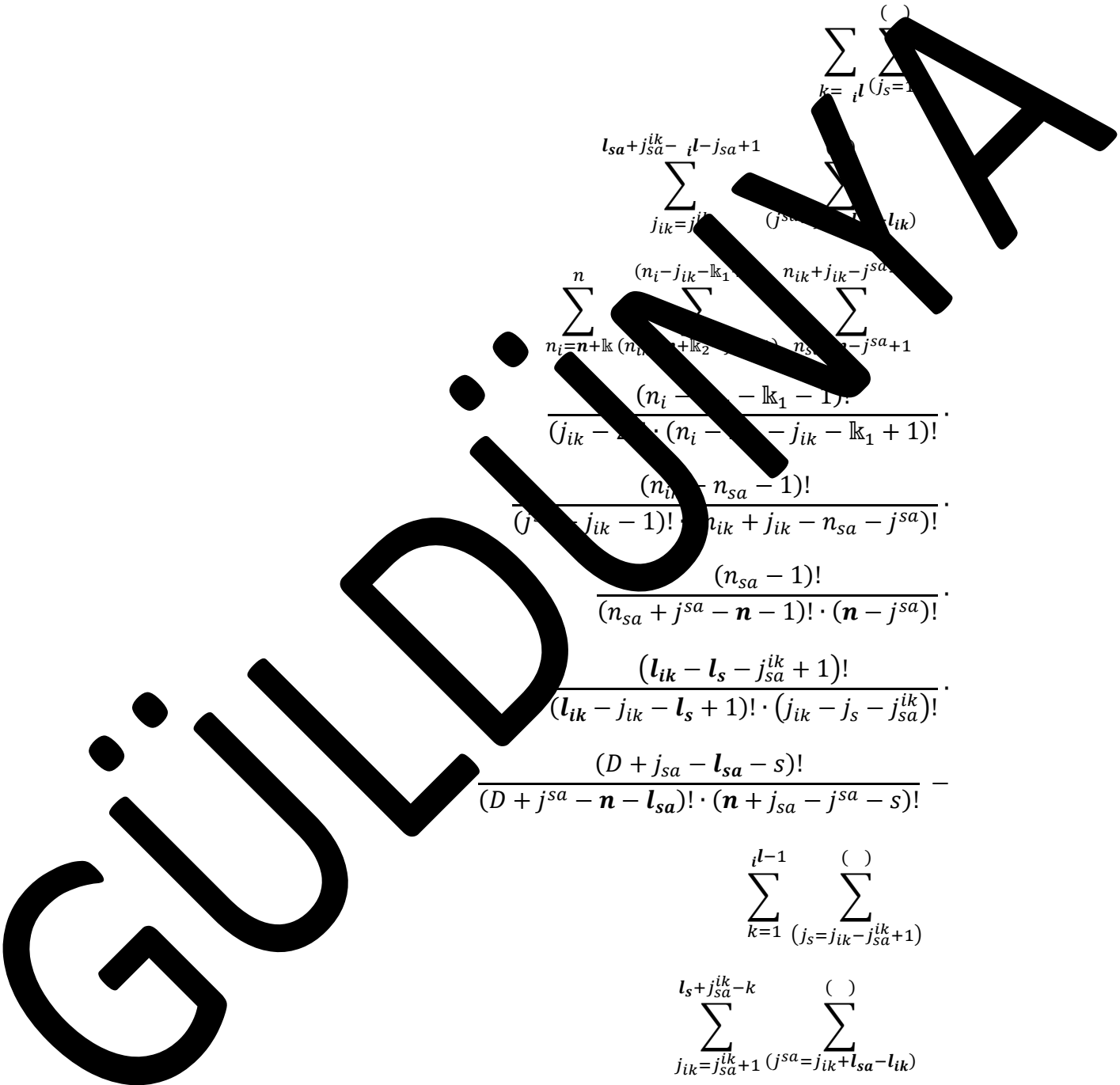
$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i-1} \sum_{j_s=1}^{(i-k)} \frac{l_{sa} + j_{sa}^{ik} - i - j_{sa} + 1}{j_{ik} = j_{sa}^{ik} + l_{sa}} \sum_{j_s=1}^{(i-k)} \binom{i-k-j_s}{j_s} \binom{l_{ik}}{j_s} \sum_{n_i=n+l_k}^n \sum_{n_{i_1}=n+l_k}^{(n_i - j_{ik} - l_{k_1})} \sum_{n_{i_2}=n+l_k}^{(n_{i_1} + l_{k_2})} \sum_{n_{i_3}=n+l_k}^{(n_{i_2} + l_{k_3})} \dots \sum_{n_{i_{i-1}}=n+l_k}^{(n_{i_{i-2}} + l_{k_{i-1}})} \frac{(n_i - j_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - l_{k_1} - 1)!} \cdot \frac{(n_{i_1} - j_{i_1} - 1)!}{(j_{i_1} - j_{ik} - 1)!} \cdot \frac{(n_{i_2} - j_{i_2} - 1)!}{(n_{i_1} + j_{i_2} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{i-1} \sum_{j_s=1}^{(i-k)} \binom{i-k-j_s}{j_s} \binom{l_{ik}}{j_s}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s + j_{sa}^{ik} - k} \sum_{j^{sa}=j_{ik} + l_{sa} - l_{ik}}^{(i-k-j_s)} \binom{i-k-j_s}{j_s}$$

$$\sum_{n_i=n+l_k}^n \sum_{n_{i_s}=n+l_k-j_s+1}^{(n_i - j_s + 1)}$$



$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \sum_{k=i}^n \sum_{\binom{()}{j_s=1}} \sum_{j_{ik}=j_{sa}^{ik} (j^{sa}=j_{sa})} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n - 1 \wedge 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{sa} + j_{sa} - s \wedge l_{ik} - j_{sa}^{ik} + 1 > l_s - j_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{ik} \leq D + j_{sa}^{ik} - n \wedge l_i \leq D + s - n \wedge l_i \geq n - \mathbb{k}_1 - \mathbb{k}_2 \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}^{()}$$

$$\sum_{j_{ik}=j_s + j_{sa}^{ik} - 1}^{l_{sa} + j_{sa}^{ik} - k - j_{sa} + 1} \sum_{(j^{sa}=j_{ik} + l_{sa} - l_{ik})}^{()}$$

$$\sum_{n_i=n+l_{sa}}^n \sum_{(n_i+j_s+1)}^{(n_i+j_s+1)}$$

$$\sum_{n_{is}=n+l_{sa}-j_{ik}}^{n_{is}+j_s-j_{ik}} \sum_{(n_{ik}+j_{ik}-j^{sa})}^{(n_{ik}+j_{ik}-j^{sa})}$$

$$\frac{(n_i - n_{is})}{(i_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - i_s - 1)! \cdot (n_{ik} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{sa} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{l_{sa} + j_{sa}^{ik} - i^{l-1} - j_{sa} + 1} \sum_{(j^{sa}=j_{ik} + l_{sa} - l_{ik})}^{()}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_{ik}-\mathbb{k}_1+1) \\ (n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}} \sum_{\substack{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2 \\ n_{sa}=n-j^{sa}+1}} \\
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa})!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - l_s - \mathbb{k})!} \cdot \\
 & \frac{(l_s - j_{sa} - s)!}{(l_s - j^{sa} - n - 1)! \cdot (n - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{\substack{(l_s-k+1) \\ (j_s=2)}} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{\substack{(\cdot) \\ (j^{sa}=j_{ik}+l_{sa}-l_{ik})}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_s+1) \\ (n_{is}=n+\mathbb{k}-j_s+1)}} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\substack{(\cdot) \\ (n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^i \sum_{\substack{(\cdot) \\ (j_s=1)}}
 \end{aligned}$$

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$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(D - l_i)}{(D + s - l_i)! (n - s)!}$$

$$D \geq n < n \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + \dots \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge \dots \wedge j_{sa}^{ik} - 1$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_2: z \dots 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \right)$$

$$\sum_{j_{ik}=j_{sa}^{ik}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=j_{sa}+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{\binom{l_s - k - 1}{l_s - k + 1}}{(l_s - k - 1)! \cdot (l_s - 2)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=i}^{(\cdot)} \sum_{j_s=1}^{(\cdot)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{j^{sa}=j_{sa}}^{(\cdot)}$$

$$\sum_{i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} +$$

$$\left(\sum_{k=1}^{i-1} \sum_{j_s=2}^{(j_{ik}-j_{sa}^{ik})} \right)$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+2)}^{(l_s+j_{sa}-k)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_1)} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (j_s-n_{is}-j_{ik}-k_1)!} \\
 & \frac{(n_{is}-n_{sa}-1)!}{(j^{sa}-j_{sa}-1)! \cdot (n_{is}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j^{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_s+j_{sa}-k+1)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)}
 \end{aligned}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - l_{ik} - 1)!}{(l_s - j_{ik} - l_{sa} - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa}^{ik} - 1)! \cdot (j_{ik} - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{(\cdot)} \sum_{i=1}^{(\cdot)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa}-i+1)} \sum_{(j^{sa}=j_{sa}+1)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+l_{ik}-l_{sa}} \sum_{(j_{sa}=j_{sa}^{ik})}^{(l_s+j_{sa}-k)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n_{ik}-k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{ik}=n_{ik}+j_{ik}-j_{sa}^{ik})}^{(\quad)} \\
 & \frac{(n_i + j_s + j_{sa} - j_{sa}^{ik} - k_1 - k_2 - j_{sa}^s)!}{(n_i - n - k_1 - k_2)! \cdot (n_{ik} + j_{sa}^{ik} - j_{sa}^{ik} - j_{sa}^s)!} \\
 & \frac{(l_s - k - 1)!}{(n_i - j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n + j_{sa} - j_{sa}^{ik} - s)!} \\
 & \sum_{k=1}^{i^l} \sum_{(j_s=1)}^{(\quad)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_{sa}=j_{sa}^{ik})}^{(\quad)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-k_1+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}^{ik}-k_2} \\
 & \frac{(n_i + j_s + j_{sa} - j_{sa}^{ik} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j_{sa}^{ik} - s - j_{sa}^s)!} \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
 \end{aligned}$$

$$D \geq n < n \wedge l_{sa} \leq D + j_{sa} - n \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$f^z S_{j_s, j_{ik}, j_{sa}} = \binom{l-1}{k=1} \sum_{(j_s=j_{ik}-j_{sa}-1)}^{l+j_{sa}^{ik}-k} \sum_{j_{sa}^{ik}+1}^{(j_{sa}^{ik}-j_{sa}-l_{ik})} \sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-n_{is}-1)!} \sum_{n_{ik}=n+k_2-j_{ik}+1}^{(n_{is}+j_{ik}-k_1)} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\begin{aligned}
 & \sum_{k=1}^{i-1} \sum_{(j_s=1)}^{(i)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(i)} \sum_{(j^{sa}=j)}^{(i)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-1)} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \left. \frac{(n_{sa} + j^{sa} - n - s)!}{(D + j_{sa}) \cdot (n - l_{sa})! \cdot (n - s)!} \right) + \\
 & \left(\sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(i^{l-1} (j_{ik} - j_{sa}^{ik}))} \right) \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s + j_{sa}^{ik} - k} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(i)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k + 1)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_s)!} \cdot \\
 & \sum_{i=2}^{l-1} \sum_{j_s=k+1}^{l_s-k+1} \binom{l-1}{j_s} \binom{l_s-k+1}{j_s} \\
 & \sum_{j_{ik}=l_s-k-k+1}^{j_{sa}^{ik}-k-k+1} \binom{j_{sa}^{ik}-k-k+1}{j_{ik}} \binom{l-1}{j_s} \binom{l_s-k+1}{j_s} \\
 & \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^l} \sum_{(j_s=1)}^{()} \frac{l_{sa} + j_{sa}^{ik} - i^l - j_{sa} + 1}{j_{ik} = j_{sa}^{ik}} \sum_{(j_s=1)}^{()} \sum_{(j_s=1)}^{()} \frac{(n_i - j_{ik} - k_1) \cdot (n_{ik} + j_{ik} - j^{sa})}{n_i = n + k_1 \quad (n_{i_s} = n + k_2) \quad n_{s_a} = n - j^{sa} + 1} \frac{(n_i - \dots - k_1 - 1)!}{(j_{ik} - \dots \cdot (n_i - \dots - j_{ik} - k_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{i^l-1} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j_s=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{i_s}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=i}^n \sum_{\binom{()}{j_s=1}} \sum_{j_{ik}=j_{sa}^{ik} (j^{sa}=j_{sa})} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}}$$

$$\sum_{n_i=n+\mathbb{k}_1-\mathbb{k}_2}^n \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_s \leq D + j_s - n \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq j_{ik} + j_{sa} - s \wedge$

$l_{ik} - \mathbb{k}_1 + 1 > l_s - j_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$l < j_s - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$fz_{j_s, j_{ik}, j^{sa}} = \binom{l-1}{k-1} \binom{l_s-k+1}{j_s=2}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{lk}-1} \binom{(\quad)}{j_{sa}=j_{ik}+l_{sa}}$$

$$\sum_{n_i=n+l_k}^n \binom{(n_i-j_s+1)}{(n_i=n+l_k-j_s+1)}$$

$$n_{is}+j_s-j_{ik}-l_{k_1} \binom{(n_{is}+j_s-j_{ik}-l_{k_1})}{(n_{is}+j_s-j_{ik}-l_{k_1}-l_{k_2})}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}} \binom{(n_{sa}=n-j^{sa}+1)}$$

$$\frac{(n_{is}-1)!}{(j_s-2)! \cdot (n_i-j_s+1)!}$$

$$\frac{(n_{ik}-l_{k_1}-1)!}{(n_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}-1) \cdot (n_{sa}-1)!}{(j^{sa}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +$$

$$\sum_{k=1}^l \binom{(\quad)}{j_s=1}$$

$$\sum_{j_{ik}=j_{sa}^{lk}} \binom{(\quad)}{j^{sa}=j_{sa}}$$

$$\sum_{n_i=n+l_k}^n \binom{(n_i-j_{ik}-l_{k_1}+1)}{(n_{ik}=n+l_{k_2}-j_{ik}+1)} \sum_{n_{sa}=n-j^{sa}+1}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j_{sa} - n - l_{sa})! \cdot (l_{sa} - s)!} \cdot \\
 & \left(\sum_{k=1}^{l-1} \binom{l-1}{k} \binom{l-k-1}{j_s} \right) \cdot \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \binom{j_{ik}-1}{n_{is}-j_{ik}-\mathbb{k}_1} \binom{j_{ik}-1}{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{j_{ik}-j_{ik}-\mathbb{k}_1} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
 \end{aligned}$$

GÜLDÜMNA

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^i \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-i^{l+1}} \sum_{(j_s=1)}^{()} (j_{sa}=j_{ik}+l_{sa}-l_{ik})$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{(n_{sa}=n-j_s+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)}$$

$$\frac{(n_i - n_{ik} - j_s - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{sa} - j_{ik} - j_s - k_1 + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{ik} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_{ik} - j_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{(j_s=2)}^{()} (j_{sa}=j_{ik}+l_{sa}-l_{ik})$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()}$$

GÜLDÜZMAYA

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\sum_{k=1}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)} \sum_{j_{sa}^{ik} (j^{sa}=j_{sa})}^{(\cdot)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik} = j_{ik} - \mathbb{k}_1 + j_{sa} = n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}^{(\cdot)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq n_i - j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} - j_{sa} \leq n - j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge j_{sa}^{ik} + j_{sa} - j_{sa} = l_{ik} \wedge$

$j_{sa}^{ik} - j_{sa} < l_{ik} \leq D - l_s + j_{sa}^{ik} - n - 1 \wedge$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$\{j_{sa}^s, \dots, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \right)$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_s+j_{sa}-k)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}} \sum_{(n_{sa}=n-j^{sa})}^{(n_{is}+j_s-j_{ik}-n_{ik}+j_{ik}-n_{sa}-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} + n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik})} \right)$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_s+j_{sa}-k)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

GÜLDÜZYA

$$\begin{aligned}
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - 1)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s + j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{sa} - l_s)! \cdot (j_s - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa}-k+1)} \sum_{(j^{sa}=l_s+j_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}
 \end{aligned}$$

GÜLDENWA

$$\begin{aligned}
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa})!} + \\
 & \sum_{k=0}^{l_s - l_s + j_{sa} - 1} \sum_{i_s=2}^{(l_s - k + 1)} \sum_{j_{ik}^{sa} + l_{ik} - l_{sa}}^{(j_{sa} = l_{sa} + n - D)} \sum_{n_i = n + k}^n \sum_{(n_{is} = n + k - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + k_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - k_1} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
 \end{aligned}$$

GÜLDÜZYAN

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{(j_s=1)}$$

$$(l_{sa} - i_{l+1})$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=n+n-D)}$$

$$\sum_{n_i=n+l_k}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{(n_{ik}=n+l_{k_2}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \sum_{n_{sa}=n-j_{ik}+1}$$

$$\frac{(n_{sa} - n_{ik} - j_{ik} - 1)!}{(j_{ik} - 2) \cdot (n_{sa} - j_{ik} - l_{k_1} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{ik} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_{ik} - j_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\left(\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_s+j_{sa}-k)}$$

$$\sum_{n_i=n+l_k}^{n} \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()}$$

GÜLDENWA

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

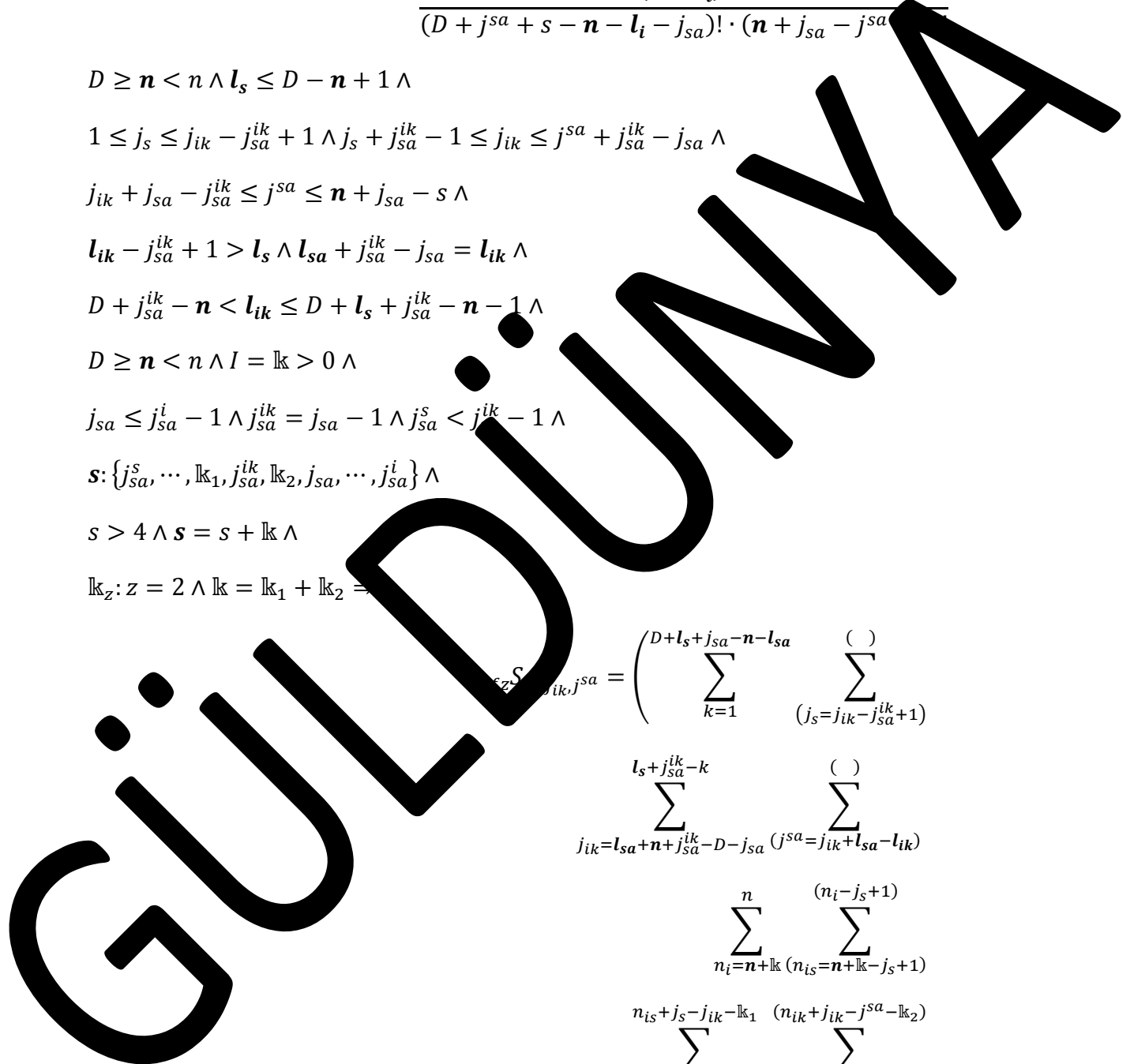
$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$



$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa})!} +$$

$$\sum_{j_s=2}^{(D+l_s+n-l_{sa})} \binom{(D+l_s+n-l_{sa}) - (j_{ik}-j_{sa})}{j_s}$$

$$\sum_{j_{ik}=l_{sa}+n+j_s}^{+j_{sa}-k} \binom{D-j_{sa}}{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

GÜLDENWA

$$\begin{aligned}
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j_s=2)}^{(n_i-j_s+1)} \\
 & \sum_{(n_{ik}+j_{sa}^{ik}-k-j_{sa}+1)}^{(n_{ik}+j_{sa}^{ik}-k-j_{sa}+1)} \sum_{(n_{ik}+j_{sa}^{ik}-k-j_{sa}+1)}^{(n_{ik}+j_{sa}^{ik}-k-j_{sa}+1)} \\
 & \sum_{(n_{ik}+j_{sa}^{ik}-k-j_{sa}+1)}^{(n_{ik}+j_{sa}^{ik}-k-j_{sa}+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{sa}=n-j^{sa}+1)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)}
 \end{aligned}$$

GÜLDÜZYA

$$\begin{aligned}
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_{sa})}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}-1)!} \cdot \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-k_1)!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_s-n-1)! \cdot (n-j^{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +
 \end{aligned}$$

$$\sum_{k=i}^l \sum_{(j_s=1)}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-i-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
 & \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-k_1+1)!}
 \end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \cdot \\
& \sum_{k=0}^{D+l_s+s} \binom{D+l_s+s-k}{k} \binom{n_{ik}-j_{sa}^{ik}}{j_s=j_{ik}-j_{sa}^{ik}} \binom{n_{ik}-j_{sa}^{ik}}{j_s=j_{ik}-j_{sa}^{ik}} \\
& \sum_{l_i=n+j_s}^{n} \binom{n-l_i}{l_i=n+j_s} \binom{n-l_i}{l_i=n+j_s} \binom{n-l_i}{l_i=n+j_s} (j^{sa}=j_{ik}+l_{sa}-l_{ik}) \\
& \sum_{n_i=n+k}^n \binom{n_i-j_s+1}{n_i=n+k} \binom{n_i-j_s+1}{n_i=n+k} \binom{n_i-j_s+1}{n_i=n+k} \\
& \sum_{l_{ik}=n_{is}+j_s-j_{ik}-k_1}^{n_{is}+j_s-j_{ik}-k_1} \binom{n_{sa}-n_{ik}+j_{ik}-j^{sa}-k_2}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2} \\
& \frac{(n_i - n - k_1 - k_2)! \cdot (j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D \geq n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j_{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \sum_{(j_{ik}=j_s+1)}^{(j_{sa}=j_{ik}+l_{sa})} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{ik}+j_s-j_{ik})}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{(n_{ik}=n-j_{ik}+1)}^{(n_{sa}=n-j_{sa}+1)} \frac{(n_i - n_{is} - 1)!}{(j_{sa} - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \right) + \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \right)$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \binom{(\quad)}{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_1)} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_i-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-k_1)!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_s-n-1)! \cdot (n-j^{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} + \\
 & \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_{sa}+n-D-j_{sa})} \\
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \binom{(\quad)}{(j^{sa}=j_{ik}+l_{sa}-l_{ik})} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{\binom{l_s - k - 1}{l_s - j_s - k + 1}}{(l_s - j_s - k + 1)! \cdot (l_s - j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa} + 1)!}{(j_s + l_{ik} - j_s - 1)! \cdot (j_{ik} - j_s - j_{sa} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=0}^{i-1} \sum_{j_s=2}^{l_s-k+1} \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{\binom{l_s-k+1}{j_s=2}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}
 \end{aligned}$$

GÜLDÜZÜMÜ

$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{(l_s - k + 1)} \sum_{(j_s=1)}^{(n - j_s + 1)} \\
 & \sum_{j_{ik}=l_{sa}+j_{sa}^{ik}-i-1}^{(n_{ik}-l_{sa}-l_{ik})} \sum_{(n_{ik}-l_{sa}-l_{ik})}^{(n_{ik}-l_{sa}-l_{ik})} \\
 & \sum_{n_i=n+l_k}^{(n+l_k-j_s+1)} \sum_{(n+l_k-j_s+1)}^{(n+l_k-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{sa}=n-j^{sa}+1)} \\
 & \frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(n_i - n_{ik} - j_{ik} - l_{k_1} + 1)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
 & \left. \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \right) - \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{(n)} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(n)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 1)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge$

$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - j_{sa}^s < j_{sa} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge s = s + 1 \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k}_z = \mathbb{k}_1 + 1 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})}^{(l_s+j_{sa}-k)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j^{sa} - n - 1)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{j_{ik}=1}^{(D+l_s+j_{sa}-j_{ik}-j_{sa})} \sum_{(j_s=2)}^{(n-j_{sa})} \\
 & \sum_{j_{ik}=1}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa})}^{(n_i-j_s+1)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{sa}-j_{sa}^{ik}+1)} \sum_{(j_{sa}=j_{sa}^{ik}+1)}$$

$$\sum_{(n_i-j_s+1)}^{(n_i+k)} \sum_{(n_i+k-j_s+1)}$$

$$\sum_{n_{is}+j_{sa}-k-k_1}^{(n_{ik}+j_{sa}-k-k_2)} \sum_{(n_{sa}=n-j^{sa}+1)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{i-1} \sum_{(j_s=2)}^{(l_s-k+1)}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \binom{l_{ik}+j_{sa}-k-j_{sa}^{ik}+1}{j_{sa}^{ik}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{sa}^{ik})} \binom{n_i-j_s+1}{j_{sa}^{ik}} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1} \sum_{(n_{sa}=n-j_{sa}^{ik}+1)} \binom{n_{is}+j_s-j_{ik}-l_{k_1}}{j_{sa}^{ik}} \binom{n_{ik}+j_{ik}-j_{sa}-l_{k_1}}{j_{sa}^{ik}} \\
 & \frac{\binom{n_i-1}{j_s-2} \binom{n_i-n_{is}-j_{sa}^{ik}+1}{j_{sa}^{ik}}}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-l_{k_1}-1)!} \\
 & \frac{\binom{n_i-n_{ik}-l_{k_1}-1}{j_{ik}-j_s-1} \binom{n_{is}-j_{sa}^{ik}-n_{ik}-j_{ik}-l_{k_1}}{n_{sa}+j_{sa}^{ik}-n-1}}{(j_{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!} \\
 & \frac{\binom{n_{ik}-n_{sa}-1}{j_{sa}-j_{ik}-1} \binom{n_{sa}+j_{sa}^{ik}-n-1}{j_{sa}^{ik}}}{(n_{sa}+j_{sa}^{ik}-n-1)! \cdot (n-j^{sa})!} \\
 & \frac{\binom{n_{sa}-1}{l_s-k-1}}{(n_{sa}+j_{sa}^{ik}-n-1)! \cdot (n-j^{sa})!} \\
 & \frac{\binom{l_s-k-1}{l_s-j_s-k+1} \binom{l_{ik}-l_s-j_{sa}^{ik}+1}{j_{ik}-j_s-1}}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \\
 & \frac{\binom{l_{ik}-l_s-j_{sa}^{ik}+1}{j_{ik}-j_s-1} \binom{l_{ik}-j_{ik}-l_s}{j_{ik}-j_s-j_{sa}^{ik}+1}}{(j_{ik}-j_s-1)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} + \\
 & \sum_{k=i}^{\binom{)}{}} \sum_{l \binom{)}{j_s=1}} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})} \binom{l_{ik}+j_{sa}-l-j_{sa}^{ik}+1}{j_{sa}^{ik}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)} \binom{n_i-j_{ik}-l_{k_1}+1}{j_{sa}^{ik}} \sum_{n_{sa}=n-j_{sa}^{ik}+1} \binom{n_{ik}+j_{ik}-j_{sa}-l_{k_2}}{j_{sa}^{ik}} \\
 & \frac{\binom{n_i-n_{ik}-l_{k_1}-1}{j_{ik}-2} \binom{n_i-n_{ik}-j_{ik}-l_{k_1}+1}{j_{sa}^{ik}}}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-l_{k_1}+1)!}
 \end{aligned}$$

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$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa}^{ik} - s)!} \cdot \\
& \sum_{k=0}^{D+l_s+s} \binom{D+l_s+s-k}{j_s=j_{ik}-j_{sa}^{ik}} \cdot \binom{j_{sa}-k}{j_{sa}=l_i+n+j_{sa}-D-s} \\
& \sum_{n_i=n+k} \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{(n_{sa}-k_2)} \\
& \frac{(n_i - n_{i-1} - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(l_s - k - 1)! \cdot (l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$D > n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}} = \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{()}{(j_s - k - j_{sa}^{ik} + 1)} \sum_{j_{ik} = l_{ik} + \dots}^{l_s + j_{sa}^{ik} - l_{sa}} \binom{()}{(j_{sa} = j_{ik} + l_{sa} - \dots)} \sum_{n_{ik} = n + \dots}^n \binom{(n_i - j_s + 1)}{(n_i - n + \mathbb{k} - \dots - j_s + 1)} \sum_{n_{ik} = n + \dots}^{n + j_s - j_{ik}} \binom{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}{(n_{sa} = n - j_{sa} + 1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \right) + \left(\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik})} \right)$$

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$$\sum_{j_{ik}=l_{ik}+n-D}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_1)}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!}$$

$$\frac{(n_{is}-n_{ik}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-n_{ik}-j_{ik}-k_1)!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j_s-n-1)! \cdot (n-j^{sa})!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!}$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_s-k+1)}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)}$$

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$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{\binom{l_s - k - 1}{l_s - j_s - k + 1}}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_s + 1)!}{(j_s + l_{ik} - j_s - 1)! \cdot (j_{ik} - j_s - j^{sa} + 1)!} \cdot \\
 & \frac{(D + j_s - l_{sa} - s)!}{(D + j^{sa} - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=l_{sa}+j_{sa}-n-l_{sa}+1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{\binom{)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}
 \end{aligned}$$

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$$\begin{aligned}
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{l_{ik}-1} \sum_{j_s=1}^{(n+l_{ik}-k-1)} \sum_{j_{ik}=l_{ik}+n-D}^{(n+l_{ik}-k-1)} \sum_{j_{sa}=j_{ik}+l_{sa}-l_{ik}}^{(n+l_{ik}-k-1-j_{ik}-j_{sa})} \\
 & \sum_{n_i=n+l_{ik}}^{(n+l_{ik}-k-1)} \sum_{n_{is}=n+l_{ik}-j_s+1}^{(n+l_{ik}-k-1-j_s+1)} \sum_{n_{sa}=n-j^{sa}+1}^{(n+l_{ik}-k-1-j_s+1)} \\
 & \frac{(n_i - n_{ik} - l_{k1} - 1)!}{(n_i - j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{k1} + 1)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{j_s=j_{ik}-j_{sa}^{ik}+1}^{(n+l_s+s-n-l_i)} \\
 & \sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{j_{sa}=j_{ik}+l_{sa}-l_{ik}}^{(n-l_s+1)} \\
 & \sum_{n_i=n+l_{ik}}^n \sum_{n_{is}=n+l_{ik}-j_s+1}^{(n-l_s+1)}
 \end{aligned}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - \dots)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - \dots - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} \leq l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - \dots \wedge j_{sa} < j_{sa}^i - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \dots \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \dots = \mathbb{k}_1 + \dots \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}} = \binom{D+l_s+j_{sa}-n-l_{sa}}{\sum_{k=1}^{(l_s-k+1)}} \sum_{(j_s=l_{ik}+n-D-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_s+j_{sa}^{ik}-1} \sum_{\binom{()}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\begin{aligned}
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - 1)!}{(D + j^{sa} - n - 1)! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{i=1}^{(D+l_s+j_s-1-l_{sa})} \sum_{k=l_{ik}+n-D-j_{sa}^{ik}+1}^{(D+l_s+j_s-1-l_{sa})} \sum_{j_s=j_s+j_{sa}^{ik}}^{(D+l_s+j_s-1-l_{sa})} \sum_{j_s=j_s+j_{sa}^{ik}}^{(D+l_s+j_s-1-l_{sa})} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot
 \end{aligned}$$

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$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=2)}^{(l_{ik}+n-D-j_s^{ik})} \frac{(l_{ik}-k+1)!}{(j_{ik}=l_{ij}+n-D-j_s^{ik})} \frac{(n_i - j_s + 1)!}{(n_i + k - (n_i + k - j_s + 1))} \frac{(n_{is} + j_s - k - k_1)!}{(n_{ik} - k_2 - j_{ik} + 1)} \frac{(n_{sa} - k_2)!}{(n_{sa} = n - j^{sa} + 1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=D+l_s+j_{sa}-n-l_{sa}+1}^{l-1} \sum_{(j_s=2)}^{(l_s-k+1)}$$

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$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_1)}$$

$$\frac{(n_i - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (j_s - n_{is} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s - l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=i}^{()} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}$$

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$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa}^{ik} - s)!} \sum_{k=1}^{D+l_s+s-n} \sum_{j_s=l_i+n-D-s}^{(l_s-k)} \sum_{j_{ik}=j_{sa}^{ik}-1}^{(j_{sa}^{ik}-1)} \sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{n_{is}=n+k-j_s+1}^{(n_{is}=n_{ik}+j_{ik}-l_{k_1})} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \frac{(n_i - n_{is} - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n_{is} - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D > l_i \wedge n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i^{l-1}} \sum_{\substack{(\cdot) \\ (j_s = \dots + l_s - l_{ik}) \\ (l_s = k+1)}} \sum_{\substack{(\cdot) \\ (j_{ik} = \dots + l_{ik} - l_{sa} (j^{sa} = j_{sa} - 1)) \\ (n_i = n + \mathbb{k}_1) \\ (n_{is} = n - j_s + 1)}} \sum_{\substack{(\cdot) \\ (n_{ik} = n - j_{ik} + 1) \\ (n_{sa} = n - j^{sa} + 1)}} \frac{(n_i - n_{is} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{i^{l-1}} \sum_{\substack{(\cdot) \\ (j_s = \dots + l_s - l_{ik}) \\ (l_s = k+1)}} \dots$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{(\cdot)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} + \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_i + j_{sa} - n - 1)! \cdot (n - j^{sa})!}{(n_i + j_{sa} - n - l_{sa} - s)! \cdot (D + j_{sa} - n - l_{sa} - s)!} \cdot \\
 & \sum_{k=1}^{l-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)} \\
 & \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\cdot)} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{(\cdot)} \sum_{i=l}^{(\cdot)}
 \end{aligned}$$

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$$\sum_{j_{ik}=j_{sa}^{ik}} \sum^{(\cdot)}_{(j^{sa}=j_{sa})}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum^{(\cdot)}_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j_{sa}-1}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(D - l_i)}{(D + s - l_i)! (n - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + \dots \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} > l_{sa}$

$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^l - 1 \wedge j_{sa}^{ik} = j_{sa} \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^l\}$

$s > 4 \wedge s = s + \mathbb{k}$

$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2$

$$f_z S_{j_s, j_{ik}, j_{sa}} = \sum_{k=1}^{l-1} \sum^{(\cdot)}_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum^{(l_{sa}-k+1)}_{(j^{sa}=j_{sa}+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum^{(n_i-j_s+1)}_{(n_{is}=n+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{is}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - k + 1)! \cdot (l_s - 2)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \sum_{k=l}^{(\cdot)} \sum_{j=1}^{(\cdot)} \sum_{j_{ik}=j_{sa}^{ik}} \sum_{j_{sa}^{sa}=j_{sa}}^{(\cdot)} \sum_{i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} \cdot \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\cdot)}$$

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$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(l_{sa}-k+1)}^{(j^{sa}=l_i+n+j_{sa}-D-s)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_i=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_s-j_{sa}-k_2)}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - k_1 - k_2 - j_s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s - j_{sa} - j^{sa} - s)! \cdot (j^{sa})!}$$

$$\frac{(l_{sa} - k - 1)!}{(j_s - k - 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_s \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n - j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$l_i \leq D + s - n \wedge$

$D \geq n < n - k > k$

$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{i-1} - j_{sa} - 1 \leq j_{sa}^{i-1} - j_{sa}^{ik} - 1 \wedge$

$s: \{j_{sa}^s, k_1, j_{sa}^{ik}, k_2, j_s, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge s = k_1 + k_2 \wedge$

$k_1 = k_2 \wedge k = k_1 + k_2 \Rightarrow$

$$fz^S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_{ik}+j_{sa}-k-j_{sa}+1)}$$

$$\begin{aligned}
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \\
 & \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n - j^{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} + j^{sa} - n - 1)!}{(n_{sa} - n_{sa} - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(n - j_s - n_{sa} - 1)!}{(n - j_s - n_{sa} - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{()} \sum_{l=1}^{()} \\
 & \sum_{j_{ik} = j_{sa}^{ik}}^{()} \sum_{(j^{sa} = j_{sa})}^{()} \\
 & \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1)}^{(n_i - j_{ik} - \mathbb{k}_1 + 1)} \sum_{(n_{sa} = n - j^{sa} + 1)}^{n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2} \\
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}
 \end{aligned}$$

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$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik})} \sum_{(j^{sa}=j_{sa}+1)}^{()}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_k+1)}^{(n_i+l_k+1)}$$

$$\sum_{n_{is}+j_s-l_{k_1}}^{()} \sum_{(n_{sa}=j^{sa}-l_{k_2})}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=i}^l \sum_{(j_s=1)}^{()}$$

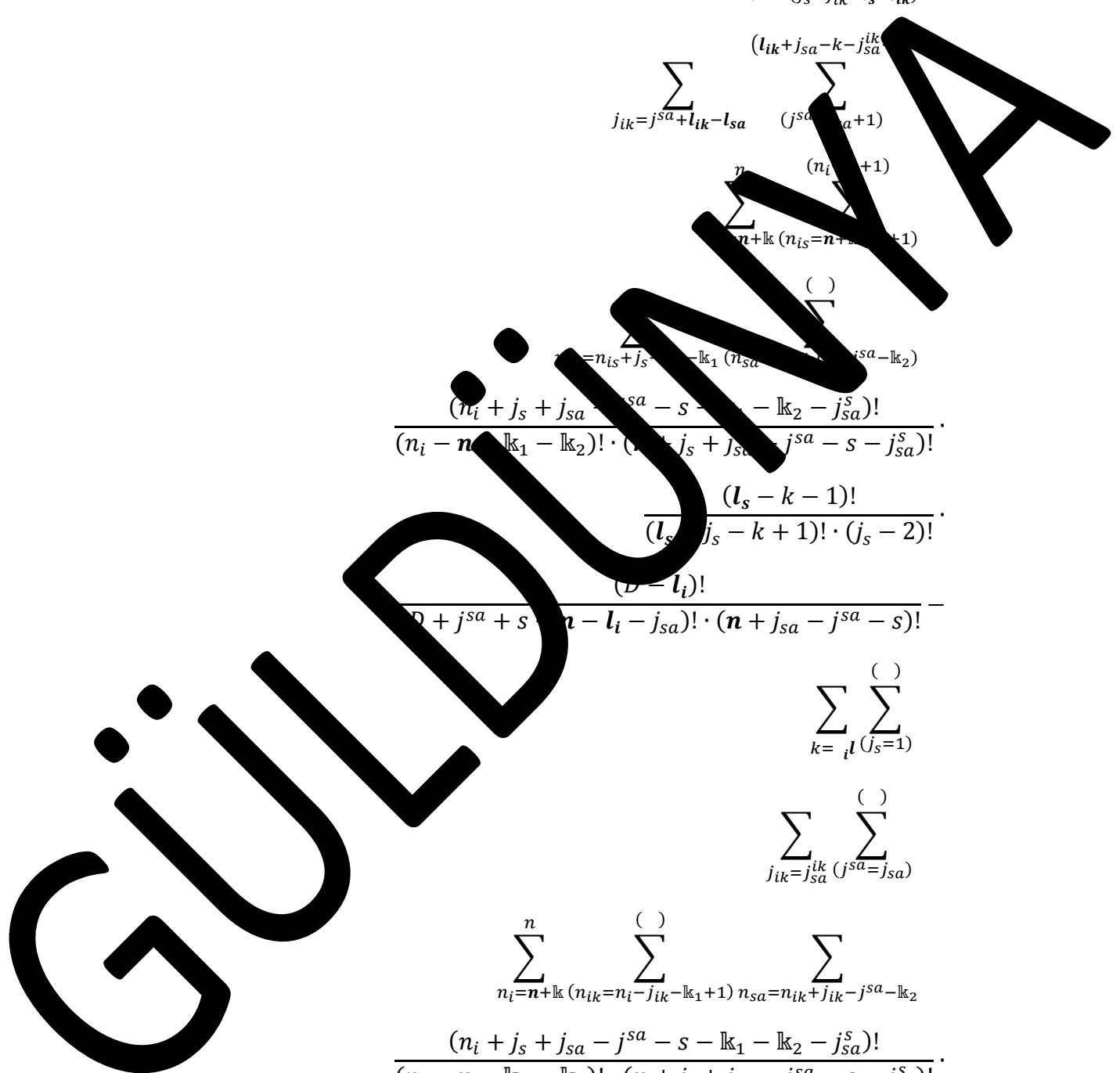
$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{()} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$



$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} \sum_{j_s, j_{ik}} S_{j_s, j_{ik}} &= \sum_{k=1}^{l-1} \binom{l-1}{k} \\ & \quad \sum_{j_{sa}=j_{sa}^{ik}+1}^{j_{sa}+1} \binom{j_{sa}-k-j_{sa}^{ik}+1}{k-l_{sa}} \\ & \quad \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \\ & \quad \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \\ & \quad \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \\ & \quad \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \\ & \quad \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\ & \quad \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \\ & \quad \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \end{aligned}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{l \in (j_s=1)}$$

$$\sum_{j_{ik}=j_{ik}}^{()} \sum_{(j_{sa}=j_{sa})}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k-l_{k_1}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{(n_{sa}=n+l_k-l_{k_2}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - l_{k_1} - 1)! \cdot (n_{ik} - j_{ik} - l_{k_1} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{ik} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j_{sa}=j_{ik}+l_{ik}-l_i)}^{()}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\begin{aligned}
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=1}^{(j_s)} \sum_{(j_s=1)}^{(j_s)} \\
 & \sum_{j_{sa}=j_{sa}}^{j_{sa}^{ik}} \sum_{(j_{sa}=j_{sa})}^{(j_{sa}=j_{sa})} \\
 & \sum_{n_i=n+l_{s_1}}^n \sum_{n_s=n+l_{s_2}}^n \sum_{n_{sa}=n-j_{sa}+1}^{n_{sa}=n-j_{sa}+1} \\
 & \frac{(n_{ik} - n_{ik} - l_{s_1} - 1)!}{(j_{ik} - 2)! \cdot (n_{ik} - n_{ik} - j_{ik} - l_{s_1} + 1)!} \cdot \\
 & \frac{(n_{sa} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} - \\
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(j_s=j_{ik}+l_s-l_{ik})} \\
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j_{sa}=j_{ik}+l_{ik}-l_i)}^{(j_{sa}=j_{ik}+l_{ik}-l_i)} \\
 & \sum_{n_i=n+l_{s_1}}^n \sum_{(n_{is}=n+l_{s_1}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{s_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{s_2})}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{s_2})}
 \end{aligned}$$

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$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\sum_{k=0}^{\binom{D}{j_s=1}} \sum_{j_{sa}^{ik} (j^{sa}=j_{sa})} \sum_{n_i=n+\mathbb{k}}^n \sum_{j_{ik}=\mathbb{k}_1}^{j_{ik}-\mathbb{k}_1+1} \sum_{j_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}^{j_{sa}-j_{ik}+1} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} - j_{sa} \leq n - j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge j_{sa}^{ik} + j_{sa} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$j_s + s - 1 < l_i \leq D + j_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$j_{sa} \leq j_{sa}^{ik} - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$j_{sa} \in \{j_{sa}^s, \dots, j_{sa}^{ik} - 1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{ik})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(n_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik}) (n_{sa} - 1)!}{(j^{sa} - n_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=i^l} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}}$$

$$\frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{k_1} + 1)!}$$

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$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - j_{sa})!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \binom{D+l_s+s-n-l_i}{j_s=j_{sa}-l_{ik}}$$

$$\sum_{j_{ik}=1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{j_{sa}=j_{ik}+l_{sa}-l_{ik}}$$

$$\sum_{j_{is}=1}^{j_{sa}+1} \sum_{j_{sa}=n+k-j_s+1}^{n+k} \binom{n+k}{n_{is}=n+k-j_s+1}$$

$$\sum_{j_{sa}=n_{is}+j_s-j_{sa}+1} \sum_{j_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2} \binom{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}$$

$$\frac{(n_i + j_{sa} - j_{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(n + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - j_{sa} + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$s > 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}+l_s-l_k)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{sa}^{ik}-l_{sa}-l_{ik})}^{()}$$

$$\frac{(n_{i-1}+1) \dots (n_{i-1}+\mathbb{k}) (n_{is}=\mathbf{n}+\mathbb{k}-j_s)}{(n_{ik}=\mathbf{n}+j_{ik}+1) (n_{sa}=\mathbf{n}+j_{sa}+1)}$$

$$\frac{(n_{is}-n_{ik}-\mathbb{k}_1-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!}$$

$$\frac{(n_{is}-n_{ik}-\mathbb{k}_1-1)!}{(j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-\mathbb{k}_1)!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j_s-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-\mathbf{n}-1)! \cdot (\mathbf{n}-j^{sa})!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-\mathbf{n}-l_{sa})! \cdot (\mathbf{n}+j_{sa}-j^{sa}-s)!} +$$

$$\sum_{k=i}^{()} \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{()} \sum_{(j^{sa}=j_{sa})}^{()}$$

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$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_{ik}-\mathbb{k}_1+1) \\ (n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}} \sum_{\substack{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2 \\ n_{sa}=n-j^{sa}+1}} \\
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} + 1)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa})!}{(D + j_{sa} - l_{sa})! \cdot (n - l_{sa})!} \cdot \\
 & \sum_{k=1}^{i^l} \sum_{\substack{(\cdot) \\ (j_s - l_{ik})}} \\
 & \sum_{\substack{l_{ik}-k \\ j_{sa}^{lk}+1}} \sum_{\substack{(\cdot) \\ (j^{sa}=j_{ik}+l_{sa}-l_{ik})}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\cdot)} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{(\cdot)}
 \end{aligned}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{\binom{(\)}{n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1}} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - l_i)!}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - j_{sa}^{ik} \geq l_{sa} \wedge$

$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^i - 1 \wedge$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\}$

$s > 4 \wedge s = s + \mathbb{k} \wedge$

$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$

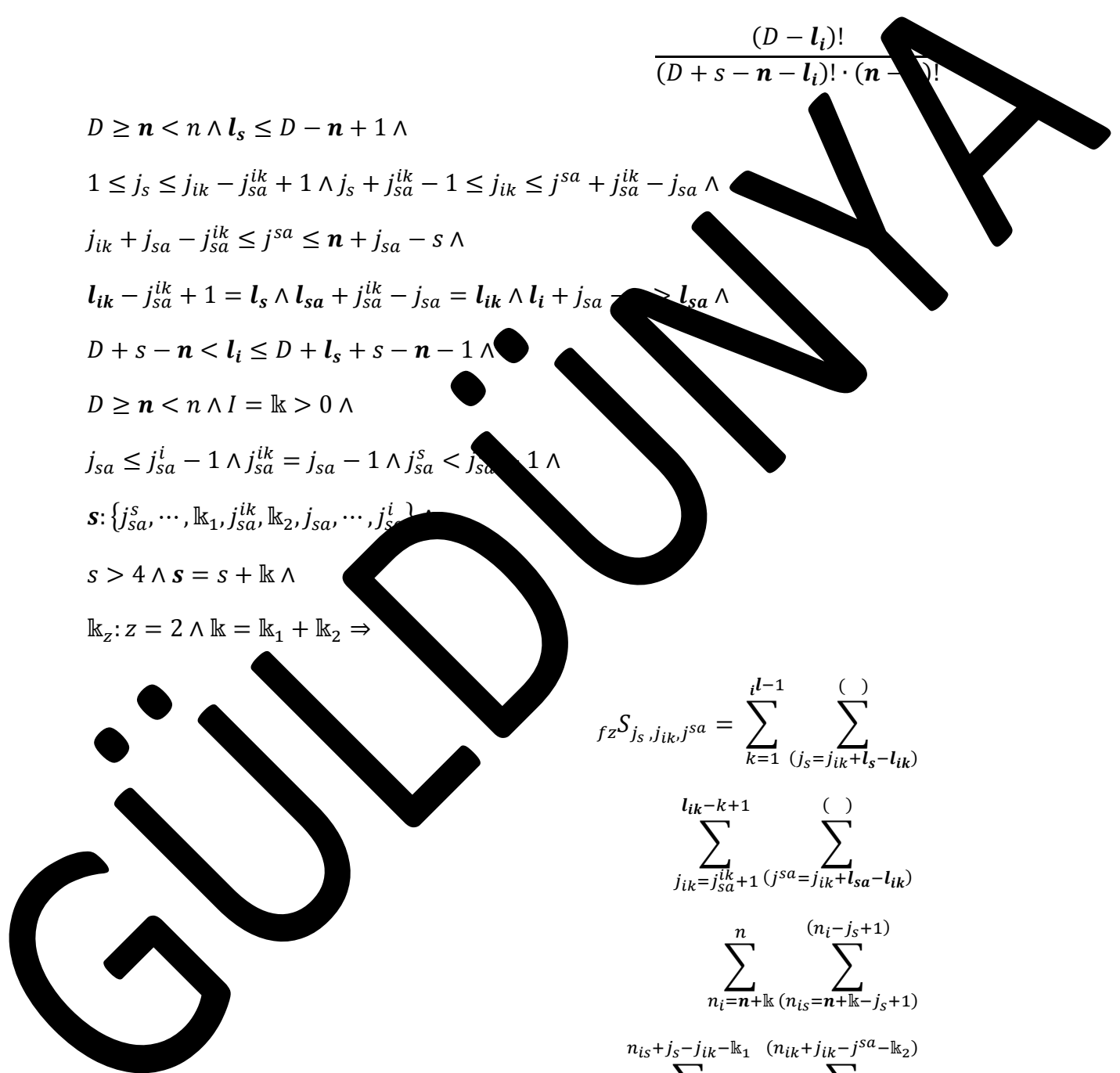
$$fz S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i^{l-1}} \sum_{\binom{(\)}{j_s=j_{ik}+l_s-l_{ik}}}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{\binom{(\)}{j^{sa}=j_{ik}+l_{sa}-l_{ik}}}$$

$$\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_{sa}=n-j^{sa}+1}}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$



$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - s)!} +$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}$$

$$\sum_{n_i=n+\mathbb{k}} \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)} \sum_{n_{sa}=n-j^{sa}+1}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}$$

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$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa})!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa})!}$$

$$\frac{(l_s - k - \dots)}{(l_s - j_s - \dots - 1)! \cdot (\dots - 2)!}$$

$$\frac{(D - l_i)}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (\dots + j_{sa} - j^{sa} - \dots)}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa}$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge \dots + j_{sa} - s > \dots \wedge$

$l_i \leq D + s - n \wedge$

$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$

$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^{sa} \leq j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$

$s > 4 \wedge s = s + \dots$

$\mathbb{k}_z: z = \dots \wedge \mathbb{k} = \mathbb{k}_1 + \dots \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_{sa}-k-j_{sa}+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{(\quad)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
 & \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(l_s - 1)!}{(D + j_s - l_s + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - \mathbf{n} - l_{sa})! \cdot (D + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=i}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{(j^{sa}=j_{sa})}^{(\cdot)} \\
 & \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=\mathbf{n}-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - \mathbf{n} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} - s)!} -
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{k=1}^{i^l-1} \sum_{(j_s=2)}^{(l_{sa}-k-j_{sa}+2)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(\cdot)} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_s)}^{(\cdot)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n-\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{(\cdot)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(\cdot)} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - \mathbb{k}_1 + 1)! \cdot (j_s - 2)!} \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n + j_{sa} - j^{sa} - s)!} \\
 & \sum_{k=1}^{(\cdot)} \sum_{(j_s=1)}^{(\cdot)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(\cdot)} \sum_{(j^{sa}=j_{sa})}^{(\cdot)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n_i-j_{ik}-\mathbb{k}_1+1)}^{(\cdot)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
 \end{aligned}$$

$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz^S j_s j_{ik} j_{sa} = \sum_{k=1}^{l-1} \sum_{(j_s=2)}^{(j_s+2)} \dots$$

$$j_{ik} = j_s + \dots + l_s \quad (j_{sa} = j_{ik} + l_{sa} - l_{ik})$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-k_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\begin{aligned}
 & \sum_{k=1}^n \sum_{i=1}^{(n-k)} \binom{n-k}{i} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{j^{sa}=j_{sa}^{ik}} \binom{n-k}{j_{sa}^{ik}} \\
 & \sum_{n_i=n+k}^n \sum_{n_{ik}=n+k_2-j_{ik}+1}^{(n_i-j_{ik}-k_1+1)} \sum_{n_{sa}=n-k-j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-1} \\
 & \frac{(n_i - n_{ik} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} - j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} - j_{sa} - 1)! \cdot (n - j^{sa})!} \\
 & \frac{(n_{sa} - 1)!}{(D + j_{sa} + s - n - l_{sa})! \cdot (n - s)!} \cdot \sum_{k=1}^{D+s-n-l_i} \sum_{j_s=l_i+n-D-s+1}^{(l_{sa}-k-j_{sa}+2)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{j^{sa}=j_{ik}+l_{sa}-l_{ik}} \binom{n-j_s+1}{j_s+l_{ik}-l_s} \\
 & \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2} \binom{n-j_s+1}{n_{is}+j_s-j_{ik}-k_1} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$

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$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz = \sum_{k=2}^{i-1} (l_{ik} - j_{sa}^{ik}) \sum_{(j_s=2)}^{j_{sa}^{ik}+2}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{n} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{n}$$

$$\sum_{n_i=n+\mathbb{k}}^{n} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^i \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=j_s}^{()} \sum_{(j^{sa}=j_{sa})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-l_{k_1}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n+l_{k_2}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}}$$

$$\frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - l_{k_1} - 1)! \cdot (n_{ik} - j_{ik} - l_{k_1} + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{ik} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!} -$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{()}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

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$$\frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \sum_{k=l}^{()} \sum_{(j_s=1)}^{()} \sum_{j_{ik}=j_s}^{()} \sum_{(j^{sa}=j_{sa})}^{()} \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1})}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-l_{k_2})}^{()} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (j_s - j_{sa} - j^{sa} - s - j_{sa}^s)!} \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{ik} - j_{sa}^{ik} < j_{ik} \leq j_s + j_{sa}^{ik} - j_s \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n - j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} = l_{ik} \wedge l_{sa} + j_{sa} - s > l_{sa} \wedge$$

$$D + s - n < l_i \leq l_s + s - n - l_i \wedge$$

$$D > n < n \wedge l_s = l_k > 0$$

$$j_{sa} < j_{sa}^i - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge j_{sa}^{ik} < j_{sa} - 1 \wedge$$

$$s \in \{j_{sa}^s, \dots, l_{k_1}, j_{sa}^{ik}, l_{k_2}, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = j_{sa} - l_{k_1} \wedge$$

$$l_{k_2} = 2 \wedge l_k = l_{k_1} + l_{k_2} \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} + j^{sa} - n - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(n - j_s - n_{ik} - 1)!}{(n - j_s - n_{ik} - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(n + j^{sa} - n - l_{sa} - s)! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=i}^{\binom{D}{i}} \sum_{l=j_s=1}^{\binom{D}{i}} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})}^{\binom{D}{i}} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}
 \end{aligned}$$

GÜLDEN

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n - s)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=l_i+n-D-s+1)}^{(l_{ik}-k-j_{sa}^{ik}+2)}$$

$$\sum_{j_{ik}=j_s+l_{ik}-l_s}^{(n)} \sum_{(j_{sa}=n+l_{sa}-l_{ik})}^{(n_i-j_{sa}+1)}$$

$$\sum_{k_1=0}^{n+l_{ik}} \sum_{(n_{is}=n-k_1+1)}^{(n_i-k_1+1)}$$

$$\sum_{k_2=0}^{(n_i-k_1+1)-j_{sa}-k_1}^{(n_i-k_1+1)}$$

$$\frac{(n_i + j_s + j_{sa} - j_{sa} - s - k_1 - k_2 - j_{sa})!}{(n_i - n - k_1 - k_2)! \cdot (n_i + j_s + j_{sa} - j_{sa} - s - j_{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(n - l_i)!}{(D + j_{sa} + n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{sa} \leq j_{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j_{sa} \leq n + j_{sa} - j_{sa}^{ik}$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D > n \wedge I = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$j_{sa} \in \{j_{sa}^i, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fzS_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} (l_{ik}+j_{sa}-k-j_{sa}^{ik}+1) \sum_{(j^{sa}=j_{sa}+1)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n-k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+k_2-j_{ik}}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{is}-k_1-k_2)}$$

$$\frac{(n_{is}-1)!}{(j_s-2)! \cdot (n_{is}+1)!} \cdot \frac{(n_{ik}-k_1-1)!}{(n_{ik}-j_s-1)! \cdot (n_{is}+j_s-j_{ik}-k_1)!}$$

$$\frac{(n_{ik}) (n_{sa}-1)!}{(j^{sa}-k-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2)}^{(l_{sa}-k+1)}$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} + j^{sa} - n - 1)!}{(n_{sa} - j^{sa} - 1)!} \cdot \frac{(n - k - 1)!}{(n - j_s - n_{ik} - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} - l_{sa} - j_{sa} - 1)! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=i}^{\binom{D}{i}} \sum_{(j_s=1)}^{\binom{D}{i}} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j^{sa}=j_{sa})} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
 & \frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{k_1} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}
 \end{aligned}$$

GÜLDÜŞMAYA

$$\begin{aligned}
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - l_{sa})!} \cdot \\
 & \sum_{j_s=1}^{i^{l-1}} \sum_{j_s=l_{ik}}^{(j_s=j_{ik}+l_{ik}-1)} \sum_{j_s=l_{ik}}^{(j_s=j_{ik}+l_{ik}-1)} \\
 & \sum_{j_s=j_{ik}-j_{sa}}^{(l_{ik}+j_{sa}-j_{ik}-1)} \sum_{j_s=j_{sa}+1}^{(l_{ik}+j_{sa}-j_{ik}-1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{n_i=n+l_k-j_s+1}^{(n_i=n+l_k-j_s+1)} \\
 & \sum_{n_i=n+l_k-j_s+1}^{(n_i=n+l_k-j_s+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!} \cdot \\
 & \sum_{k=1}^{(j_s)} \sum_{l=(j_s=1)}^{(j_s)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(j_{ik}=j_{sa}^{ik})} \sum_{j^{sa}=j_{sa}}^{(j^{sa}=j_{sa})} \\
 & \sum_{n_i=n+l_k}^n \sum_{n_{ik}=n_i-j_{ik}-l_{k_1}+1}^{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}
 \end{aligned}$$

GÜLDÜMÜNKA

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz \mathcal{S}_{j_s, j_{ik}, j_{sa}} = \sum_{k=1}^{i-1} \sum_{(j_s = j_{ik} + l_s - l_{ik})}^{()}$$

$$\sum_{j_{ik} = j_{sa}^{ik} + 1}^{l_{ik} - k + 1} \sum_{(j^{sa} = j_{ik} + j_{sa} - j_{sa}^{ik})}^{(l_{sa} - k + 1)}$$

$$\sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1}^{n_{is} + j_s - j_{ik} - \mathbb{k}_1} \sum_{(n_{sa} = n - j_{sa} + 1)}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
& \sum_{j_{ik}=j_{sa}^{lk}} \sum_{(j_s=1)}^{(l_{sa}-i_{l+1})} \sum_{(j^{sa}=j_{sa})} \\
& \sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{(n_i - n_{ik} - l_{k_1} + 1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
& \frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{k_1} + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{lk} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot
\end{aligned}$$

$$\sum_{k=1}^{i_{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \binom{(\quad)}{(\quad)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{sa}^{ik})} \binom{(n_i-j_s+1)}{(\quad)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1} \quad (n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2})} \binom{(\quad)}{(\quad)} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - j_{sa}^{ik})!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - l_{k_1} - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!} \\
 & \sum_{k=l}^{\quad} \sum_{(j_s=1)}^{\quad} \binom{(\quad)}{(\quad)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=j_{sa})} \binom{(\quad)}{(\quad)} \\
 & \sum_{n_i=n+l_k} \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})} \binom{(\quad)}{(\quad)} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}
 \end{aligned}$$

$$D \geq n < n + l_s \leq D - n + 1 \wedge$$

$$1 \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$l_i \leq D + s - n \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}} = \sum_{i=1}^{l-1} \sum_{j=2}^{k-j_{sa}^{ik}+2} \binom{l-1}{j} \sum_{i_s=1}^{l_{sa}} \sum_{i_{ik}=j_{ik}+j_{sa}-j_{sa}^{ik}}^{i+l_{ik}-l_s} \binom{l_{sa}}{i_{ik}+j_{sa}-j_{sa}^{ik}} \sum_{i_{is}=1}^n \binom{n}{i_{is}} \sum_{i_{ik}=n_{ik}+j_{ik}-j_{sa}^{ik}+1}^{n_{is}+j_{is}-\mathbb{k}_1} \binom{n_{is}+j_{is}-\mathbb{k}_1}{n_{ik}+j_{ik}-j_{sa}^{ik}-\mathbb{k}_2} \sum_{i_{sa}=n_{sa}-j_{sa}^{sa}+1}^{n_{is}+j_{is}-\mathbb{k}_1} \binom{n_{is}+j_{is}-\mathbb{k}_1}{n_{sa}-j_{sa}^{sa}+1} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(k - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa}^s)!} \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa}^s)!} \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa}^s + j_{sa}^{ik} - j_{ik} - j_{sa})!} \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa}^s - s)!} +$$

$$\begin{aligned}
 & \sum_{k=1}^{i-1} \sum_{(j_s=1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j_{sa}=j_s)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_k-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=j_{sa}+1}^{n_{ik}+j_{ik}-j_{sa}-l_{k_2}} \\
 & \frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{k_1} - 1)!} \cdot \\
 & \frac{(j_{sa} - j_{ik} - 1)! \cdot (n_{sa} - j_{sa} - 1)!}{(n_{sa} - 1)!} \cdot \frac{(n_{sa} - 1)!}{(n_i + j_{sa} - 1)! \cdot (n - j_{sa})!} \\
 & \frac{(l_{sa} - j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - l_{sa} - l_{ik})! \cdot (j_{sa} - j_{sa})!} \cdot \\
 & \frac{(j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{()} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{()} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2})}^{()} \\
 & \frac{(n_i + j_s + j_{sa} - j_{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j_{sa} - s - j_{sa}^s)!}
 \end{aligned}$$

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$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}$$

$$\sum_{k=1}^{(j_s - l_i)}$$

$$\sum_{j_{ik} = j_{sa} - k}^{(j_s - l_i)}$$

$$\sum_{n_i = n + k}^n \sum_{n_{sa} = n_i - j^{sa} - k}^{(j_s - l_i)}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - k_1 - k_2)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq n + j_{sa} - s \wedge$$

$$l_s - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + j_{sa} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} (l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)$$

$$\sum_{(j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)}^{(n-D)}$$

$$\sum_{(n_i-n_{is}-1)}$$

$$\sum_{n_{ik}=n+l_{ik}}^{(n_{is}=n+\mathbb{k}-j_s)}$$

$$\sum_{(n_{ik}-n_{sa}-1)}$$

$$\sum_{(j_s-j_{ik}-1)}^{(n_{ik}+j_{ik}-n_{sa}-j^{sa})}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j_s-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{is}-n_{is}-\mathbb{k}_1-1)!}{(n_{is}-n_{is}-j_s-n_{ik}-j_{ik}-\mathbb{k}_1)!}$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +$$

$$\sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=l_{ik}+j_{sa}-k-j_{sa}^{ik}+2)}^{(l_{sa}-k+1)}$$

$$\begin{aligned}
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - \mathbb{k}_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} + j^{sa} - n - 1)!}{(n_{sa} - n - 1)! \cdot (j^{sa})!} \cdot \\
 & \frac{(n - j_s - n_{ik} - 1)! \cdot (j_s - 2)!}{(n - j_s - n_{ik} - 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik})! \cdot (l_{ik} - j_{sa})!}{(j_{ik} - l_{sa} - j_{sa} - 1)! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
 & \sum_{k=i}^{\binom{(\cdot)}{i}} \sum_{(j_s=1)}^{\binom{(\cdot)}{i}} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-i+1)} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}
 \end{aligned}$$

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$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - l_{sa})!} \cdot \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \binom{D+l_s+j_{sa}-n-l_{sa}}{(j_s=j_{sa}-l_{ik})} \cdot \sum_{l=0}^{(l_{ik}+j_{sa}-j^{sa}-1)} \binom{l_{ik}+j_{sa}-j^{sa}-1}{l} \cdot \sum_{m=0}^{j_{sa}+j_{sa}^{ik}-j_{sa}-l} \binom{j_{sa}+j_{sa}^{ik}-j_{sa}-l}{m=l_{sa}+n-D} \cdot \sum_{n_1=0}^{n-l_{sa}-l} \binom{n-l_{sa}-l}{n_1+l} \cdot \sum_{n_2=0}^{n_1+l} \binom{n_1+l}{n_2} \cdot \sum_{k_1=0}^{n_2} \binom{n_2}{k_1} \cdot \sum_{k_2=0}^{n_2-k_1} \binom{n_2-k_1}{k_2} \cdot \frac{(n_i + j_{sa} - j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge l_i - j_{sa}^{ik} = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge (D + s - n < l_i \leq D + l_s + s - n - 1) \vee (D \geq n < n \wedge l_s \leq D - n + 1 \wedge 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j_{sa}} = \sum_{k=0}^{i-1} \sum_{j_s = j_{ik} + l_s - l_{ik}}^{i-1-k} \sum_{l_{sa} + l_{sa}^{ik} - D - j_{sa} = l_{sa} - k + 1}^{i-1-k} \sum_{j_{ik} = j_{sa} + 1}^{n} \sum_{(j_{sa} = l_{sa} + n - D)}^{(n_i - j_s + 1)} \sum_{n_i = n + \mathbb{k}}^n \sum_{(n_{is} = n + \mathbb{k} - j_s + 1)}^{(n_i - j_s + 1)} \sum_{n_{is} + j_s - j_{ik} - \mathbb{k}_1}^{n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2} \sum_{n_{ik} = n + \mathbb{k}_2 - j_{ik} + 1} \sum_{(n_{sa} = n - j_{sa} + 1)}^{(n_i - n_{is} - 1)!} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)}$$

$$\sum_{n+l_k}^n \sum_{(n_{is}=n+l_k+1)}^{(n_{is}+1)}$$

$$\sum_{n_{ik}=n_{is}-j_{ik}-k_1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(j^{sa}=j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)}$$

$$\frac{(n_{is} - n_{is} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{is} - k_1 - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{i^l (j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i^{l+1})} \sum_{(j^{sa}=l_{sa}+n-D)}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik})!} \cdot \\
& \frac{(l_{sa} - j_{sa}^{ik} - 1)!}{(l_{sa} - j_{sa}^{ik} - 1)! \cdot (n - j^{sa} - n - l_{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+n-l_{sa}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\
& \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{()} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}
\end{aligned}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + s - n < l_i \leq D + l_s + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$f_z^S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i^{l-1} (l_{sa} + n - D - j_{sa})} \sum_{(j_s=2)} \sum_{j_{ik}=j_s+l_{ik}-l_s}^{(l_{sa}-k+1)} \sum_{(j^{sa}=l_{sa}+n-D)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\begin{aligned}
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \\
 & \sum_{k=1}^{i-1} \sum_{l=1}^{k-j_s-2} \dots \\
 & \sum_{n_i=n+k}^{n_i=n+k-1} \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \dots \\
 & \sum_{n_{ik}=n+k_2-j_{ik}+1}^{j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \dots \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
 \end{aligned}$$

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$$\begin{aligned}
 & \sum_{k=1}^{\binom{D}{l}} \sum_{(j_s=1)}^{\binom{D-l}{j_s}} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{\binom{l_{sa}-i_{l+1}}{j_{sa}=l_{sa}+n}} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{\binom{n_i-j_{ik}-l_{k_1}+1}{n_{ik}+j_{ik}-j_{sa}-l_{k_1}}} \sum_{n_{sa}=j_{sa}+1}^{\binom{n_i-j_{ik}-l_{k_1}+1}{n_{sa}=j_{sa}+1}} \\
 & \frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{k_1} - 1)!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - 1)! \cdot (n - j_{sa})!} \\
 & \frac{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - j_{sa} - j_{sa})!}{(n_{sa} - 1)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - l_{ik})! \cdot (j_{sa} - j_{sa})!} \\
 & \frac{(l_{sa} - l_{sa} - s)!}{(D + l_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} \\
 & \sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{\binom{l_{ik}-k-j_{sa}^{ik}+2}{j_s=l_{sa}+n-D-j_{sa}+1}} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s}^{\binom{D}{j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik}}} \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{\binom{n_i-j_s+1}{n_{is}=n+l_k-j_s+1}} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}}^{\binom{D}{n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2}}} \frac{(n_i + j_s + j_{sa} - j_{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j_{sa} - s - j_{sa}^s)!}
 \end{aligned}$$

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$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}$$

$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$

$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s \leq l_{sa} \wedge$

$l_i \leq D + s - n)) \wedge$

$D \geq n < n \wedge I = \mathbb{K} > 0 \wedge$

$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge s < j_{sa}^{ik} - 1$

$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \dots, j_{sa}, \dots, j_{sa}^i\} \wedge$

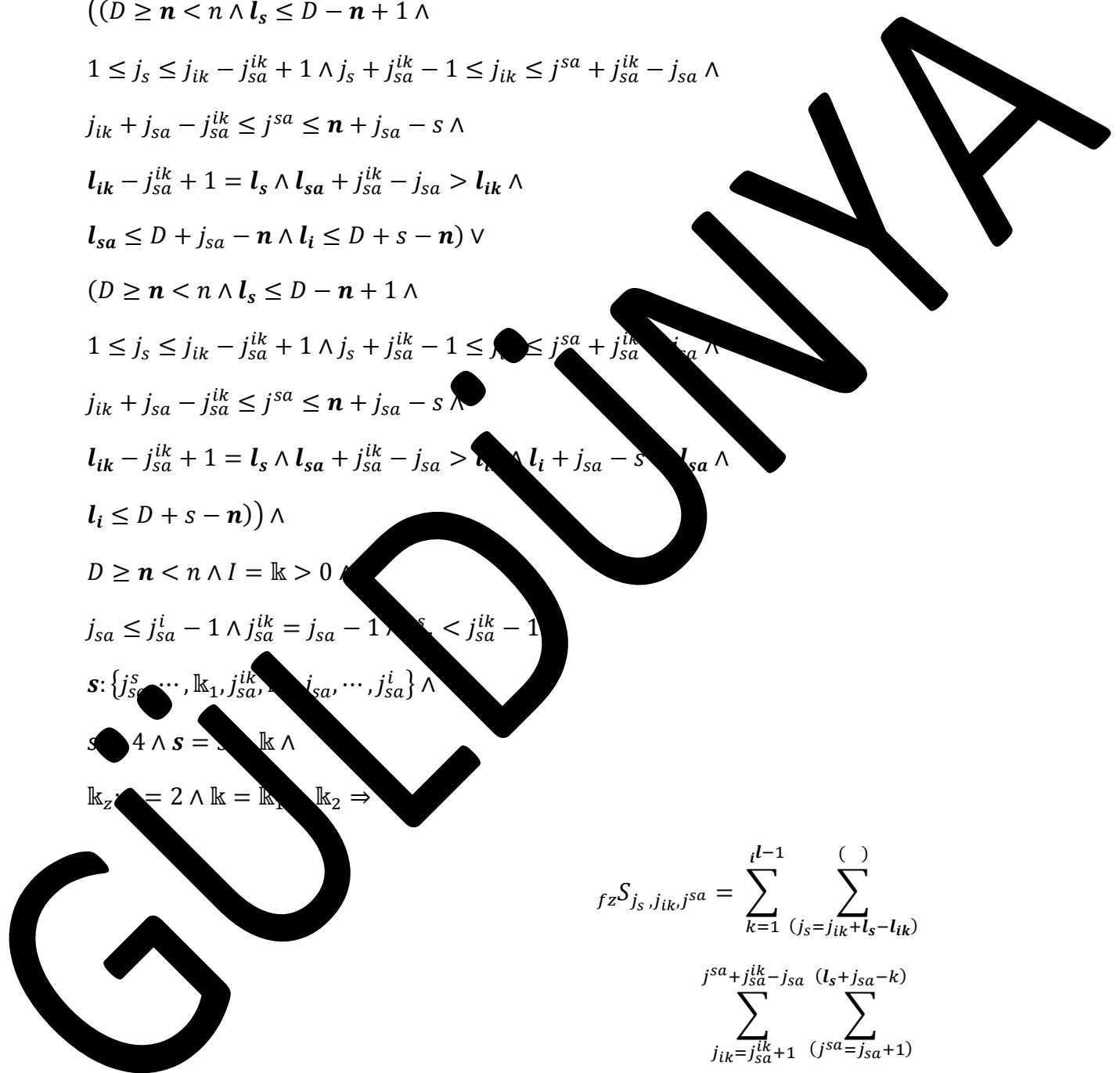
$s \geq 4 \wedge s = \mathbb{k}_1 \wedge$

$\mathbb{k}_2 = 2 \wedge \mathbb{k} = \mathbb{k}_1 \wedge \mathbb{k}_2 \Rightarrow$

$$fz S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{j^{sa}+j_{sa}^{ik}-j_{sa}} \sum_{(j^{sa}=j_{sa}+1)}^{(l_s+j_{sa}-k)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$



$$\begin{aligned}
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\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_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (\mathbf{n} - j^{sa})!} \cdot \\
& \frac{(l_s - 1)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(j_s + j_{sa}^{ik} - j^{sa})!}{(j_s + l_{sa} - j^{sa})! \cdot (j_s + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_s - \mathbf{n} - l_{sa})! \cdot (\mathbf{n} + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(\)} \\
& \sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=l_s+j_{sa}-k+1)}^{(l_{sa}-k+1)} \\
& \sum_{n_i=\mathbf{n}+\mathbb{k}}^{\mathbf{n}} \sum_{(n_{is}=\mathbf{n}+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=\mathbf{n}+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=\mathbf{n}-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\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}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{j_{ik}=j_{sa}^{lk}} \sum_{(j_s=1)}^{()} \sum_{(j^{sa}=j_{sa})}^{(l_{sa}-i_{l+1})}$$

$$\sum_{=n+l_k}^{(n_i - n_{ik} - l_{k_1} + 1)} \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}}$$

$$\frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{k_1} + 1)!} \cdot$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{lk} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{i_{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)} \sum_{(j^{sa}=j_{sa}+1)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{sa})}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j_{sa}-l_{k_2})}^{(\quad)} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
 & \frac{(l_s - k + 1)!}{(l_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(D - l_i)!}{(D + j^{sa} + s - n - j_{sa})! \cdot (n + j_s + j_{sa} - j^{sa} - s)!} \\
 & \sum_{k=i}^{(\quad)} \sum_{(j_s=1)}^{(\quad)} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(\quad)} \sum_{(j^{sa}=j_{sa})}^{(\quad)} \\
 & \sum_{n_i=n+l_k}^{(\quad)} \sum_{(n_{ik}=n_i-j_{ik}-l_{k_1}+1)}^{(\quad)} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2}}^{(\quad)} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \\
 & \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}
 \end{aligned}$$

$$((D \geq n < \dots) \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^{j_{sa}^s, \dots, j_{sa}^i} = \sum_{k=2}^{i-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}-j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \sum_{k=1}^{l_s} \sum_{(j_s=1)}^{()} \sum_{j_{ik}=1}^{(l_{sa}-k+1)} \sum_{(j^{sa}=j_{sa})}^{()} \sum_{n_i=n+k}^{(n_i-n-k_1+1)} \sum_{(n_{is}=n+k_2-j_{ik}+1)}^{()} \sum_{n_{sa}=n-j^{sa}+1}^{()} \frac{(n_i - n_{ik} - k_1 - 1)!}{(n_i - n_{ik} - j_{ik} - k_1 + 1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{ik} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

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$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=l}^{\binom{()}{j_s}} \sum_{\binom{()}{j_{ik}=j_{sa}^{ik} (j^{sa}=j_{sa})}}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\binom{()}{n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}} \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$(D \geq n < n \wedge l_i \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$l_{sa} \leq D + j_{sa} - n \wedge l_i \leq D + s - n) \vee$$

$$D > n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$l_i \leq D + s - n)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S j_{sa}^{i-l-k+1} j_{sa}^{i-l-k+1} \sum_{k=1}^{i-l-k+1} \binom{l_{sa}-k+1}{j_{sa}^{i-l-k+1}}$$

$$j_{ik}^{i-l-k+1} \binom{l_{sa}-k+1}{j_{sa}^{i-l-k+1}}$$

$$\sum_{n_i=n+\mathbb{k}}^{(n_i-j_s+1)} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

GÜLDENWA

$$\begin{aligned}
 & \sum_{k=1}^{i-1} \sum_{(j_s=1)}^{()} \\
 & \sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i+1)} \sum_{(j^{sa}=j_s)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k-j_{ik}+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{n_{sa}=j_{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-k_1} \\
 & \frac{(n_i - n_{ik} - k_1)!}{(j_{ik} - 2)! \cdot (n_i - j_{ik} - k_1 - 1)!} \cdot \frac{(n_{sa} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_i + j^{sa} - 1)! \cdot (n - j^{sa})!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - l_{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \frac{(l_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \\
 & \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(l_{ik}-k-j_{sa}^{ik}+2)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{()} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!}{(n_i - n - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}
 \end{aligned}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \sum_{k=l}^{()} \sum_{j_s=1}^{()} \sum_{j_{ik}=1}^{()} \sum_{j_{sa}=1}^{()} \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n_{ik}, n_{sa}=n_{sa}, l_{ik}=j_{sa}-l_{k_2})} \frac{(n + j_s + j_{sa} - j^{sa} - l_{k_1} - l_{k_2})!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa})!} \cdot \frac{(D - l_i)!}{(D + s - n - l_i)! \cdot (n - s)!}$$

$$\begin{aligned} & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_s - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge \\ & D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - j_{sa}^{ik} \wedge \\ & D + s - n < l_i \leq D + j_{sa} + s - n - j_{sa}) \vee \\ & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \\ & j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge \\ & l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge \\ & D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee \\ & ((D \geq n < n \wedge l_s \leq D - n + 1 \wedge \\ & 1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge \end{aligned}$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$\begin{aligned} & \sum_{k=j_{sa}^{ik}+1}^{j_{sa}^{ik}-j_{sa}} \sum_{l_s=l_{sa}+k}^{l_s-l_{ik}} \\ & \sum_{n_i=n+\mathbb{k}}^n \sum_{n_{is}=n+\mathbb{k}-j_s+1}^{(n_i-j_s+1)} \\ & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{n_{sa}=n-j_{sa}+1}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \\ & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\ & \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \\ & \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \\ & \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \\ & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\ & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \end{aligned}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=l_{sa}-k+1)}^{(l_{sa}-k+1)}$$

$$\sum_{n+n_k}^{(n_{is}+1)}$$

$$\sum_{n_{ik}=n_{sa}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(j^{sa}=1)}^{(n_{is}+j_{ik}-j^{sa}-k_2)}$$

$$\frac{(n_{is}-1)!}{(j_s-2)! \cdot (n_{is}-j_s+1)!}$$

$$\frac{(n_{is}-n_{sa}-k_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}+j_s-n_{ik}-j_{ik}-k_1)!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j_s-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j^{sa}-n-1)! \cdot (n-j^{sa})!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{sa}+j_{sa}^{ik}-l_{ik}-j_{sa})!}{(j_{ik}+l_{sa}-j^{sa}-l_{ik})! \cdot (j^{sa}+j_{sa}^{ik}-j_{ik}-j_{sa})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=i^l}^{()} \sum_{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}}^{(l_{sa}-i^{l+1})} \sum_{(j^{sa}=l_{sa}+n-D)}$$

GÜLDÜZMAYA

$$\begin{aligned}
 & \sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}} \\
 & \frac{(n_i - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - l_{k_1} + 1)!} \cdot \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik})!} \cdot \\
 & \frac{(l_{sa} - j_{sa}^{ik} - 1)!}{(l_{sa} - j_{sa}^{ik} - 1)! \cdot (n - j^{sa} - n - l_i - s)!} \cdot \\
 & \sum_{k=1}^{D+n-s-n-l_i} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{(l_s+j_{sa}-k)} \\
 & \sum_{j_{ik}=j^{sa}+j_{sa}^{ik}-j_{sa}}^{(j^{sa}=l_i+n+j_{sa}-D-s)} \\
 & \sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}^{(n_i-j_s+1)} \\
 & \frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
 & \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
 \end{aligned}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - j_{sa}^{ik} \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa} = j_{sa} - 1 \wedge j_{sa}^{ik} \leq j_{sa}^{ik} - 1$$

$$s \in \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^i, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + 1$$

$$\mathbb{k}_2: \mathbb{Z} \wedge \mathbb{k} = \mathbb{k}_1 + 1 \Rightarrow$$

$$fz S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+1}^{l_{sa}+n+j_{sa}^{ik}-D-j_{sa}-1} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-k+1)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\begin{aligned}
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - 1)!}{(j_s - 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(n_{is} + j_{sa} - j^{sa})!}{(j_{is} + l_{sa} - j^{sa})! \cdot (j^{sa} - j_{sa} - j_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{k=1}^{i-1} \sum_{(j_s=j_{ik}+l_s-l_{ik})}^{()} \\
& \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}^{(l_{sa}-k+1)} \\
& \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!}
\end{aligned}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \\
& \sum_{i=1}^{(n)} \sum_{j_s=1}^{(n)} \frac{(l_{sa} - i - l + 1)!}{\sum_{j_{ik}=j_{sa}^{ik}} \sum_{j^{sa}=l_{sa}+n-D} (n_i - n_{ik} - \mathbb{k}_1 + 1)! \cdot (n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)!} \\
& \sum_{i=n+\mathbb{k}}^{(n)} \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{(n_i - n_{ik} - \mathbb{k}_1 + 1)} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{ik} + j_{ik} - j^{sa} - \mathbb{k}_2)} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(l_{sa} + j_{sa}^{ik} - j^{sa} - l_{ik})! \cdot (j^{sa} - j_{sa})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} - \\
& \sum_{k=1}^{D+l_s+s-n-l_i} \sum_{j_s=j_{ik}+l_s-l_{ik}}^{(n)}
\end{aligned}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j_{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})} \sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_{sa}^{ik})}^{(n_i-j_s+1)} \sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{sa}-k_2)} \frac{(n_i+j_s+j_{sa}-j^{sa}-s-k_1-j_s)!}{(n_i-n-k_1-k_2)! \cdot (n+j_s-j_{sa}-j^{sa}-j_s)!} \cdot \frac{(l_s-k-1)!}{(j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(D-k)!}{(D+j^{sa}+s-n-k-j_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!}$$

$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge$

$D + j_{sa} - n < l_{sa} \leq D + l_{ik} + j_{sa} - n - 1 \wedge$

$D + s - n < l_s \leq D + l_s + s - n - j_{sa}) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$

$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$

$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$

$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$

$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$

$l_{ik} - j_{sa}^{ik} + 1 = l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} > l_{ik} \wedge l_i + j_{sa} - s > l_{sa} \wedge$

$$(D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}^s} = \sum_{k=1}^{l-1} \frac{(l-1)(l_{sa} + j_{sa} - D - j_{sa})}{(j_s - 1)!} \cdot \frac{(l_{sa} - k + 1)!}{(j_s + l_{ik} - l_s - k)!} \cdot \frac{(n_i - j_s + 1)!}{(n_i - n + k - j_s + 1)!} \cdot \frac{(n_{is} + j_{sa} - k - k_1 - 1)!}{(n_{ik} + j_{ik} - j_{sa} - k_2 - 1)!} \cdot \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j_{sa} - l_{ik})! \cdot (j_{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

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$$\begin{aligned}
 & \sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)} \\
 & \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{(j^{sa}=j_{ik}+j_{sa}-i^k)}^{(l_{sa}-k+1)} \\
 & \sum_{n_i=n+k}^n \sum_{(n_{is}=n-k-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n-j^{sa}+j_{ik}-k_2)} \\
 & \sum_{n_{ik}=n+k_2-j_{ik}} \sum_{(n_{sa}=n-j^{sa}+j_{ik}-k_2)} \\
 & \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_{is} - j_s + 1)!} \\
 & \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \\
 & \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \\
 & \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \\
 & \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \\
 & \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - j_{sa})!}{(j_{ik} + l_{sa} - j^{sa} - l_{ik})! \cdot (j^{sa} + j_{sa}^{ik} - j_{ik} - j_{sa})!} \\
 & \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +
 \end{aligned}$$

$$\sum_{k=1}^{()} \sum_{i^l}^{(j_s=1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}} \sum_{(j^{sa}=l_{sa}+n-D)}^{(l_{sa}-i^{l+1})}$$

$$\begin{aligned}
& \sum_{n_i=n+\mathbb{k}}^n \sum_{\substack{(n_i-j_{ik}-\mathbb{k}_1+1) \\ (n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}} \sum_{\substack{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2 \\ n_{sa}=n-j^{sa}+1}} \\
& \frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa} - 1)!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{sa} + j_{sa}^{ik} - l_{ik} - 1)!}{(l_{sa} + j_{sa}^{ik} - j_{sa}^{ik} - l_{ik})! \cdot (j^{sa} - j_{sa}^{ik})!} \cdot \\
& \frac{(l_{sa} - j_{sa}^{ik} - 1)!}{(l_{sa} - j_{sa}^{ik} - 1)! \cdot (n - j^{sa} - n - 1)! \cdot (n - j^{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+n-l_i} \sum_{j_s=l_i+n-D-s+1}^{(l_s-k+1)} \\
& \sum_{j_{ik}=j_s+l_{ik}-l_s} \sum_{\substack{(\cdot) \\ (j^{sa}=j_{ik}+j_{sa}-j_{sa}^{ik})}} \\
& \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \\
& \sum_{n_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{\substack{(\cdot) \\ (n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}} \\
& \frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}
\end{aligned}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_s \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 =$$

$$fz^S_{j_s, j_{ik}, j_{sa}} = \sum_{k=1}^{i-1} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik}+1)}$$

$$\sum_{j_{ik}=j_{sa}^{ik}+l_{ik}-l_{sa}} \sum_{(j_{sa}=l_{sa}+n-D)}^{(l_s+j_{sa}-k)}$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - k)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \\
& \frac{(D + j_{sa} - l_{sa})!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa})!} + \\
& \sum_{j_{ik}=j}^{i^{l-1} (l_s - k + 1)} \sum_{j_s=2}^{(l_{sa} - k + 1)} \sum_{n_i=n+k}^n \sum_{n_{is}=n+k-j_s+1}^{(n_i - j_s + 1)} \\
& \sum_{n_{ik}=n+k_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{sa}=n-j^{sa}+1}^{(n_{ik}+j_{ik}-j^{sa}-k_2)} \\
& \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \\
& \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \\
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot
\end{aligned}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{()} \sum_{i=1}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_{sa}-i+1)} \sum_{(j^{sa}=l_i+n-j_{sa}-D)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{ik}=n+k_2+1)}^{(n_i-j_{ik}-k_1+1)} \sum_{(n_{sa}=n-j_{sa}-k_2)}^{(n_{ik}+j_{ik}-j^{sa}-k_2)}$$

$$\frac{(n_{sa}-n_{ik}-j_{sa}-1)!}{(j_{ik}-2)!(n_{sa}-j_{sa}-k_1+1)!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{sa}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j^{sa})!}$$

$$\frac{(l_{ik}-j_{ik}-l_s-j_{sa}^{ik}+1)!}{(l_{ik}-j_{ik}-l_s+1)! \cdot (j_{ik}-j_{sa}^{ik})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} -$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{()}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}}^{(l_s+j_{sa}-k)} \sum_{(j^{sa}=l_i+n+j_{sa}-D-s)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n+k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)}^{()}$$

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$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - \mathbb{k}_1 - \mathbb{k}_2 - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j_{sa}^s)!}$$

$$((D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D + s - n < l_i \leq D + l_{sa} + s - n - 1) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_{sa} + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1) \vee$$

$$D \geq n < n - l = \mathbb{k} > 1 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^i = j_{sa} - 1 \wedge j_{sa}^s = j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^i, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}^s, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = \mathbb{k} + \mathbb{k} \wedge$$

$$\mathbb{k}_z: \mathbb{k} \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i^{l-1}(j_{ik} - j_{sa}^{ik} + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - l_{k_1} - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - j_{ik} - l_{k_1})!}$$

$$\frac{(n_{ik} - n_{sa} - j^{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} + j^{sa} - n - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (j_s - 1)!}$$

$$\frac{(l_{ik} - j_{sa}^{ik} + 1)!}{(n_{is} + l_{ik} - j_{sa}^{ik} + 1)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}$$

$$\sum_{j_{ik}=l_s+j_{sa}^{ik}-k+1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{k_2})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!}$$

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$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_s + 1)!}{(j_s + l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_s + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=i}^{(\)} \sum_{l=(j_s=1)}$$

$$\sum_{j_{ik}=l_{sa}}^{l_{sa}+j_{sa}^{ik}-i+l_{sa}+1} \sum_{j_{sa}=D-j_{sa}}^{(\)} (j^{sa}=j_{ik}+l_{sa}-l_{ik})$$

$$\sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2}$$

$$\frac{(n_i - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - 2)! \cdot (n_i - n_{ik} - j_{ik} - \mathbb{k}_1 + 1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s+s-n-l_i} \sum_{(j_s=j_{ik}-j_{sa}^{ik}+1)}^{(\quad)}$$

$$\sum_{j_{ik}=l_i+n+j_{sa}^{ik}-D-s}^{l_s+j_{sa}^{ik}-k} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_i)}^{(\quad)}$$

$$\sum_{n_i=n+k}^n \sum_{(n_{is}=n-k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n_{is}+j_s-j_{ik}-k_1} \sum_{(n_{ik}=n_{ik}+j_{ik}-j^{sa}-k_1)}^{(\quad)}$$

$$\frac{(n_i + j_s + j_{sa} - j_{sa}^{ik} - k_1 - l_{sa} - j^{sa})!}{(n_i - n - k_1 - l_{sa} - j^{sa})! \cdot (n_{ik} + j_{sa}^{ik} - j^{sa} - j_{sa}^{ik})!}$$

$$\frac{(l_s - k - 1)!}{(n_i - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - k)!}{(n_{sa} + s - n - l_i - j^{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$((D \geq n < n \wedge l_s \leq D - l_i - 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge$$

$$D + j_{sa} - n < l_{ik} \leq D + l_s + j_{sa} - n - 1 \wedge$$

$$D + s - l_i < l_i \leq D + l_s + s - n - j_{sa}) \vee$$

$$(D \geq n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} + j_{sa} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa} - n < l_{sa} \leq D + l_s + j_{sa} - n - 1)) \wedge$$

$$D \geq n < n \wedge I = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, k_1, j_{sa}^{ik}, k_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + k \wedge$$

$$k_z: z = 2 \wedge k = k_1 + k_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}} = \sum_{k=1}^{i^{l-1} (l_{sa} + n - D - j_{sa})} \sum_{(j_s=2)}^{l_{sa} + j_{sa}^{ik} - k - j_{sa} + 1} \sum_{j_{ik}=l_{sa} + n + j_{sa}^{ik} - D - j_{sa}}^{(n_i - j_s + 1)} \sum_{(n_{is} + j_{ik} - k_1 - (n_{is} - n_{ik} - k_1 - 1))}^{(n_i - j_s + 1)} \sum_{(n_{is} + j_{ik} - k_2 - (n_{is} - n_{ik} - k_2 - 1))}^{(n_i - j_s + 1)} \sum_{(n_{sa} + j_{sa} - j_{ik} - 1)}^{(n_{sa} = n - j_{sa} + 1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 1)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - k_1 - 1)!}{(j_{ik} - k_1 - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - k_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(n_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{(j_s=l_{sa}+n-D-j_{sa}+1)}^{(l_s-k+1)}$$

$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{ik}-1}^{l_{sa}+j_{sa}^{ik}-k-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{is}=n+\mathbb{k}-j_s)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+\mathbb{k}_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_1)} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1)!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_i+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_s-n-1)! \cdot (n-j^{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_s+l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +
 \end{aligned}$$

$$\sum_{k=i}^{()} \sum_{(j_s=1)}^{()}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{sa}+n+j_{sa}^{ik}-D-j_{sa}}^{l_{sa}+j_{sa}^{ik}-i-l-j_{sa}+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
 & \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_{ik}=n+\mathbb{k}_2-j_{ik}+1)}^{(n_i-j_{ik}-\mathbb{k}_1+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2} \\
 & \frac{(n_i-n_{ik}-\mathbb{k}_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-\mathbb{k}_1+1)!}
 \end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} \cdot \sum_{k=1}^{D+l_s+s-n} \sum_{j_s=l_i+n-D-s}^{(l_s-k-1)} \binom{()}{j_{ik}=j_{sa}^{ik}-1} \binom{()}{j^{sa}=j_{sa}^{ik}-l_{ik}} \sum_{n_i=n+k}^{(n_i-j_s+1)} \sum_{(n_{is}=n+k-j_s+1)} \sum_{i_k=n_{is}+j_s-j_{ik}-k_1}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2)} \binom{()}{(n_i - n_{is} - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - k_1 - k_2 - j_{sa}^s)!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(D - l_i)!}{(D + j^{sa} + s - n - l_i - j_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$D > n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge I = k > 0 \wedge$$

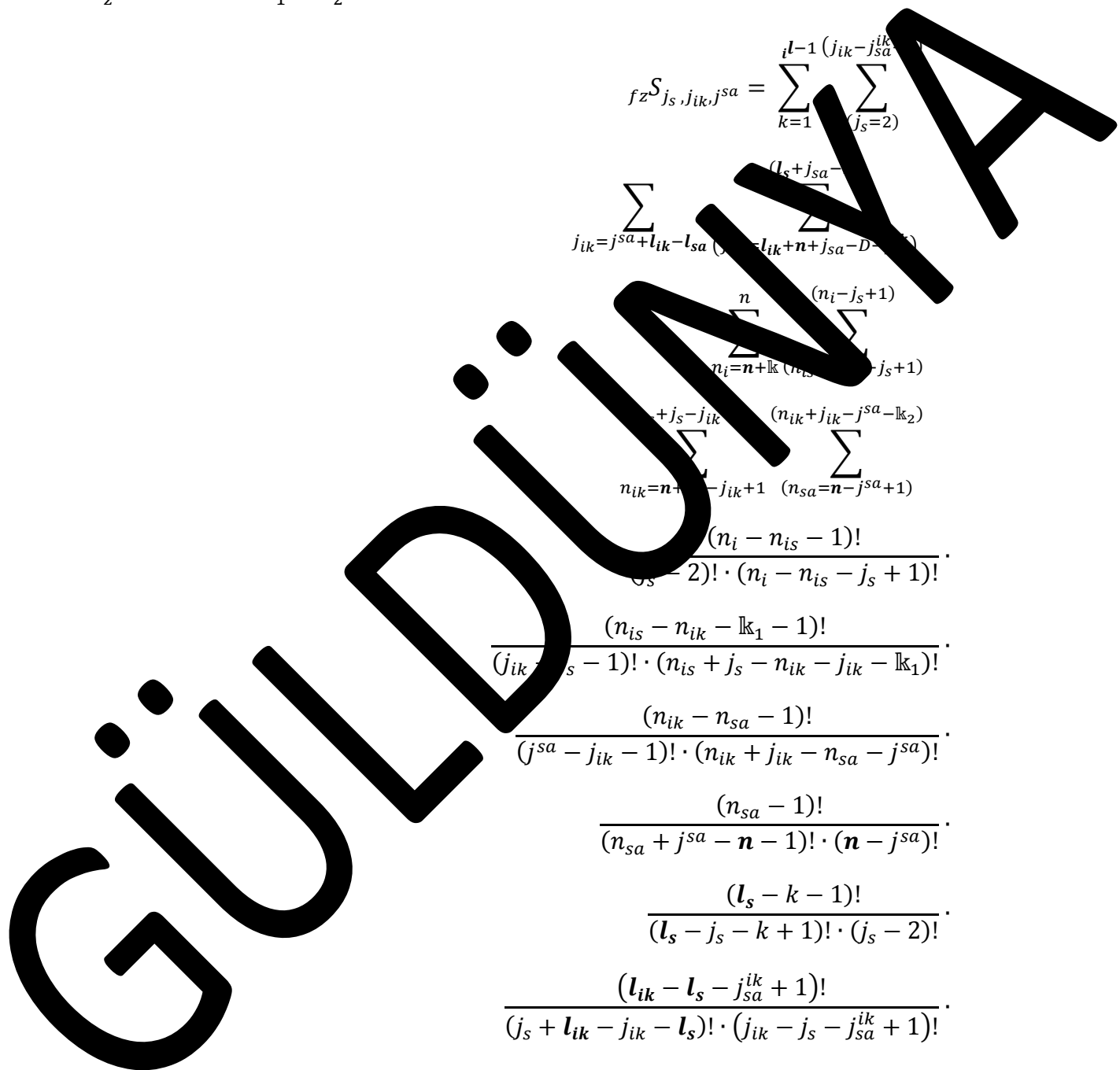
$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j^{sa}} = \sum_{k=1}^{i^{l-1} (j_{ik} - j_{sa}^{ik})} \sum_{(j_s=2)} \sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j_s=l_{ik}+n+j_{sa}-D)} \sum_{n_i=n+\mathbb{k}}^n \sum_{(n_i=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \sum_{n_{ik}=n+j_{ik}-j_s+1}^{+j_s-j_{ik}} \sum_{(n_{sa}=n-j^{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!} + \sum_{k=1}^{i^{l-1} (l_s - k + 1)} \sum_{(j_s=2)}$$



$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_s+j_{sa}-k+1)}^{(l_{ik}+j_{sa}-k-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_{sa}^{ik})}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=n-j_{sa}^{ik}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_1})}$$

$$\frac{(n_i-1)}{(j_s-2) \cdot (n_i-n_{is}+1)!}$$

$$\frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1) \cdot (n_i-n_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}-n_{sa}-1)}{(j^{sa}-j_{ik}+1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j^{sa})!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{ik}+1)!}{(j_{ik}-l_{ik}-j_{sa}^{ik})! \cdot (j_{ik}-j_s-j_{sa}^{ik}+1)!}$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +$$

$$\sum_{k=1}^{()} \sum_{l(j_s=1)}$$

$$\sum_{j_{ik}=j^{sa}+l_{ik}-l_{sa}} \sum_{(j^{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik})}^{(l_{ik}+j_{sa}-l-j_{sa}^{ik}+1)}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{n_{sa}=n-j^{sa}+1}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}}$$

$$\frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-l_{k_1}+1)!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}} \binom{D+l_s+j_{sa}-k}{j_s=j_{ik}-j_{sa}^{ik}} \cdot \binom{l_s-k}{l_s-k} \cdot \\
& \sum_{j_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1}^{j_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}}^{j_{sa}=l_{ik}+n+j_{sa}-D-j_{sa}^{ik}} \binom{n_i-j_s+1}{n_i=n+\mathbb{k}} \sum_{(n_{is}=n+\mathbb{k}-j_s+1)}^{(n_i-j_s+1)} \binom{()}{j_{ik}=n_{is}+j_s-j_{ik}-\mathbb{k}_1} \sum_{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-\mathbb{k}_2)} \cdot \\
& \frac{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}{(n_i - n - \mathbb{k}_1 - \mathbb{k}_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}
\end{aligned}$$

$$D > n < n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{sa}^{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = \mathbb{k} > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}} = \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(j_{ik}-j_{sa}^{ik})} \sum_{(j_{ik}=l_{ik}+1)}^{(l_s+j_{sa}^{ik}-1)} \sum_{(j_{sa}=j_{ik}+l_{sa}-1)}^{(n)} \sum_{(n_i=n+\mathbb{k})}^{(n_i-j_s+1)} \sum_{(n_{ik}=n+j_{ik}-1)}^{(n_{ik}+j_{ik}-j_{sa}-\mathbb{k}_2)} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{sa}-1)} \frac{(n_i - n_{is} - 1)!}{(j_s - 2)! \cdot (n_i - n_{is} - j_s + 1)!} \cdot \frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!} \cdot \frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!} \cdot \frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!} \cdot \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!} \cdot \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} + \sum_{k=1}^{i^{l-1}} \sum_{(j_s=2)}^{(l_s-k+1)}$$

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$$\sum_{j_{ik}=l_s+j_{sa}^{lk}-k+1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{is}=n+l_k-j_s+1)}^{(n_i-j_s+1)}$$

$$\sum_{n_{ik}=n+l_{k_2}-j_{ik}+1}^{n_{is}+j_s-j_{ik}-l_{k_1}} \sum_{(n_{sa}=j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!}$$

$$\frac{(n_{is}-n_{ik}-l_{k_1}-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-n_{ik}-j_{ik}-l_{k_1})!}$$

$$\frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!}$$

$$\frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j^{sa})!}$$

$$\frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!}$$

$$\frac{(l_{ik}-l_s-j_{sa}^{lk}+1)!}{(j_{ik}-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{lk}+1)!}$$

$$\frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} +$$

$$\sum_{k=i}^l \sum_{(j_s=1)}^{()}$$

$$\sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()}$$

$$\sum_{n_i=n+l_k}^n \sum_{(n_{ik}=n+l_{k_2}-j_{ik}+1)}^{(n_i-j_{ik}-l_{k_1}+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{n_{ik}+j_{ik}-j^{sa}-l_{k_2}}$$

$$\frac{(n_i-n_{ik}-l_{k_1}-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-l_{k_1}+1)!}$$

$$\begin{aligned}
& \frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!} \cdot \\
& \frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!} \cdot \\
& \frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!} \cdot \\
& \frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - l_{sa} - s)!} \cdot \\
& \sum_{k=1}^{D+l_s+j_{sa}} \binom{D+l_s+j_{sa}-k}{k} \sum_{j_s=j_{ik}-j_{sa}^{ik}}^{j_{ik}-k} \binom{j_{ik}-k}{j_s} \\
& \sum_{n_i=n+k}^{n_i} \sum_{n_{is}=n+k-j_s+1}^{n_i-j_s+1} \binom{n_i-j_s+1}{n_{is}} \\
& \sum_{l_{ik}=n_{is}+j_s-j_{ik}-k_1}^{n_{is}+j_s-j_{ik}-k_1} \sum_{n_{sa}=n_{ik}+j_{ik}-j^{sa}-k_2}^{n_{sa}} \binom{n_{sa}}{n_{ik}+j_{ik}-j^{sa}-k_2} \\
& \frac{(n_i - n_{is} - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}{(n_i - n_{is} - k_1 - k_2)! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!} \cdot \\
& \frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!} \cdot \\
& \frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}
\end{aligned}$$

$$D > l_s \wedge n \wedge l_s \leq D - n + 1 \wedge$$

$$1 \leq j_s \leq j_{ik} - j_{sa}^{ik} + 1 \wedge j_s + j_{sa}^{ik} - 1 \leq j_{ik} \leq j^{sa} + j_{sa}^{ik} - j_{sa} \wedge$$

$$j_{ik} - j_{sa}^{ik} \leq j^{sa} \leq n + j_{sa} - s \wedge$$

$$l_{ik} - j_{sa}^{ik} + 1 > l_s \wedge l_{sa} + j_{sa}^{ik} - j_{sa} = l_{ik} \wedge l_i + j_{sa} - s = l_{sa} \wedge$$

$$D + j_{sa}^{ik} - n < l_{ik} \leq D + l_s + j_{sa}^{ik} - n - 1 \wedge$$

$$D \geq n < n \wedge l = k > 0 \wedge$$

$$j_{sa} \leq j_{sa}^i - 1 \wedge j_{sa}^{ik} = j_{sa} - 1 \wedge j_{sa}^s < j_{sa}^{ik} - 1 \wedge$$

$$s: \{j_{sa}^s, \dots, \mathbb{k}_1, j_{sa}^{ik}, \mathbb{k}_2, j_{sa}, \dots, j_{sa}^i\} \wedge$$

$$s > 4 \wedge s = s + \mathbb{k} \wedge$$

$$\mathbb{k}_z: z = 2 \wedge \mathbb{k} = \mathbb{k}_1 + \mathbb{k}_2 \Rightarrow$$

$$fz^S_{j_s, j_{ik}, j_{sa}} = \sum_{k=1}^{i^{l-1} (l_{ik} + n - D - j_{sa})} \sum_{s=2}^{(j_s - 1)}$$

$$\sum_{j_{ik} = l_{ik} - k + 1}^{l_{ik} - k + 1} \sum_{j_{sa} = j_{ik} + l_{sa}}^{(j_{sa} = j_{ik} + l_{sa})}$$

$$\sum_{n_i = n + \mathbb{k}_1}^n \sum_{j_s = j_s + 1}^{(n_i - j_s + 1)}$$

$$\sum_{n_{ik} = n - j_{ik} + 1}^{n_{ik} + j_s - j_{ik}} \sum_{n_{sa} = n - j_{sa} + 1}^{(n_{ik} + j_{ik} - j_{sa} - \mathbb{k}_2)}$$

$$\frac{(n_i - n_{is} - 1)!}{(j_{sa} - 1)! \cdot (n_i - n_{is} - j_s + 1)!}$$

$$\frac{(n_{is} - n_{ik} - \mathbb{k}_1 - 1)!}{(j_{ik} - j_s - 1)! \cdot (n_{is} + j_s - n_{ik} - j_{ik} - \mathbb{k}_1)!}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j_{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j_{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j_{sa} - n - 1)! \cdot (n - j_{sa})!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(j_s + l_{ik} - j_{ik} - l_s)! \cdot (j_{ik} - j_s - j_{sa}^{ik} + 1)!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j_{sa} - n - l_{sa})! \cdot (n + j_{sa} - j_{sa} - s)!} +$$

$$\sum_{k=1}^{i^{l-1}} \sum_{j_s = l_{ik} + n - D - j_{sa}^{ik} + 1}^{(l_s - k + 1)}$$

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$$\begin{aligned}
 & \sum_{j_{ik}=j_s+j_{sa}^{lk}-1}^{l_{ik}-k+1} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
 & \sum_{n_i=n+lk}^n \sum_{(n_{is}=n+lk-j_s+1)}^{(n_i-j_s+1)} \\
 & \sum_{n_{ik}=n+lk_2-j_{ik}+1}^{n_{is}+j_s-j_{ik}-lk_1} \sum_{(n_{sa}=n-j_{sa}+1)}^{(n_{ik}+j_{ik}-j^{sa}-lk_1)} \\
 & \frac{(n_i-1)!}{(j_s-2)! \cdot (n_i-n_{is}+1)!} \cdot \frac{(n_{is}-n_{ik}-lk_1-1)!}{(j_{ik}-j_s-1)! \cdot (n_{is}-n_{ik}-j_{ik}-lk_1)!} \\
 & \frac{(n_{ik}-n_{sa}-1)!}{(j^{sa}-j_{ik}-1)! \cdot (n_{ik}+j_{ik}-n_{sa}-j^{sa})!} \cdot \frac{(n_{sa}-1)!}{(n_{sa}+j_{sa}-n-1)! \cdot (n-j^{sa})!} \\
 & \frac{(l_s-k-1)!}{(l_s-j_s-k+1)! \cdot (j_s-2)!} \cdot \frac{(l_{ik}-l_s-j_{sa}^{lk}+1)!}{(j_{ik}-l_{ik}-j_{ik}-l_s)! \cdot (j_{ik}-j_s-j_{sa}^{lk}+1)!} \\
 & \frac{(D+j_{sa}-l_{sa}-s)!}{(D+j^{sa}-n-l_{sa})! \cdot (n+j_{sa}-j^{sa}-s)!} + \sum_{k=i}^l \sum_{(j_s=1)}^{()}
 \end{aligned}$$

$$\begin{aligned}
 & \sum_{j_{ik}=l_{ik}+n-D}^{l_{ik}-i^{l+1}} \sum_{(j^{sa}=j_{ik}+l_{sa}-l_{ik})}^{()} \\
 & \sum_{n_i=n+lk}^n \sum_{(n_{ik}=n+lk_2-j_{ik}+1)}^{(n_i-j_{ik}-lk_1+1)} \sum_{(n_{sa}=n-j^{sa}+1)}^{n_{ik}+j_{ik}-j^{sa}-lk_2} \\
 & \frac{(n_i-n_{ik}-lk_1-1)!}{(j_{ik}-2)! \cdot (n_i-n_{ik}-j_{ik}-lk_1+1)!}
 \end{aligned}$$

$$\frac{(n_{ik} - n_{sa} - 1)!}{(j^{sa} - j_{ik} - 1)! \cdot (n_{ik} + j_{ik} - n_{sa} - j^{sa})!}$$

$$\frac{(n_{sa} - 1)!}{(n_{sa} + j^{sa} - n - 1)! \cdot (n - j^{sa})!}$$

$$\frac{(l_{ik} - l_s - j_{sa}^{ik} + 1)!}{(l_{ik} - j_{ik} - l_s + 1)! \cdot (j_{ik} - j_{sa}^{ik})!}$$

$$\frac{(D + j_{sa} - l_{sa} - s)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + j_{sa} - j^{sa} - s)!}$$

$$\sum_{k=1}^{D+l_s+j_{sa}-n-l_{sa}} \sum_{l_s-k+1}^{l_s-k+1} \sum_{l_{ik}+n-D-j_{sa}^{ik}}$$

$$j_{ik} = j_{sa}^{ik-1} (j^{sa} = j_{ik}^{sa} - l_{ik})$$

$$\sum_{n_i=n+l_k}^{(n_i-j_s+1)} \sum_{(n_i=n+l_k-j_s+1)}$$

$$\sum_{l_{ik}=n_i+j_s-j_{ik}-l_{k_1}}^{(n_{sa}=n_{ik}+j_{ik}-j^{sa}-l_{k_2})}$$

$$\frac{(n_i + j_s + j_{sa} - j^{sa} - s - l_{k_1} - l_{k_2} - j_{sa}^s)!}{(n_i - n_{sa} - l_{k_1} - l_{k_2})! \cdot (n + j_s + j_{sa} - j^{sa} - s - j_{sa}^s)!}$$

$$\frac{(l_s - k - 1)!}{(l_s - j_s - k + 1)! \cdot (j_s - 2)!}$$

$$\frac{(D - l_i)!}{(D + j^{sa} - n - l_{sa})! \cdot (n + l_{sa} - j^{sa} - l_i)!}$$

GÜLDÜNYA

DİZİN

B

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin son durumunun bulunabileceği olaylara göre

- simetrik olasılık, 2.3.1.1.1.1.1/3
- toplam düzgün simetrik olasılık, 2.3.1.2.1.1.1/3
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- toplam düzgün simetrik olasılık, 2.3.1.2.1.4.3.1/3
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Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bir bağımlı-bağımsız durumlu simetrisinin son durumunun bulunabileceği olaylara göre

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simetrik olasılık, 2.3.1.1.1.6.1.1/3

toplam düzgün simetrik olasılık, 2.3.1.2.1.6.1.1/3

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Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.1.6.2.1/3

toplam düzgün simetrik olasılık, 2.3.1.2.1.6.2.1/3

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Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin durumuna bağlı

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toplam düzgün simetrik olasılık, 2.3.1.2.2.1.1.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.1.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.1.2.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.1.2.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.1.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.1.3.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.1.3.1/3

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Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.2.1.1/5

toplam düzgün simetrik olasılık, 2.3.1.2.2.2.1.1/3

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Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.2.2.1/5

toplam düzgün simetrik olasılık, 2.3.1.2.2.2.2.1/3

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Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

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toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.2.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.4.1.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.4.1.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.4.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.4.2.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.4.2.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.4.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.4.3.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.4.3.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.4.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.6.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.6.1.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.6.1.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.6.2.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.6.2.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.6.2.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.6.3.1/4

toplam düzgün simetrik olasılık, 2.3.1.2.2.6.3.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.6.3.1/4

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.7.1.1/5

toplam düzgün simetrik olasılık, 2.3.1.2.2.7.1.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.2.7.1.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrisinin ilk ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.7.2.1/5

toplam düzgün simetrik olasılık,
2.3.1.2.2.7.2.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.2.7.2.1/6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumlu
bağımlı simetrisinin ilk ve son durumunun
bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.2.7.3.1/3-4

toplam düzgün simetrik olasılık,
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toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.2.7.3.1/5

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu simetrisinin ilk
ve herhangi bir durumunun bulunabileceği
olaylara göre

simetrik olasılık, 2.3.1.1.3.1.1.1/4

toplam düzgün simetrik olasılık,
2.3.1.2.3.1.1.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.3.1.1.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin ilk ve herhangi bir durumunun
bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.3.1.2.1/4

toplam düzgün simetrik olasılık,
2.3.1.2.3.1.2.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.3.1.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin ilk ve herhangi bir durumunun
bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.3.1.3.1/4

toplam düzgün simetrik olasılık,
2.3.1.2.3.1.3.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.3.1.3.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
simetrisinin ilk ve herhangi bir durumunun
bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.3.2.1.1/5

toplam düzgün simetrik olasılık,
2.3.1.2.3.2.1.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.3.2.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımsız simetrisinin ilk ve herhangi bir
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.3.2.2.1/5

toplam düzgün simetrik olasılık,
2.3.1.2.3.2.2.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.3.2.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumlu
bağımlı simetrisinin ilk ve herhangi bir
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.3.2.3.1/4

toplam düzgün simetrik olasılık,
2.3.1.2.3.2.3.1/3-4

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.3.2.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu simetrisinin
herhangi bir durumuna bağlı

simetrik olasılık, 2.3.1.1.4.1.1.1/4

toplam düzgün simetrik olasılık,
2.3.1.2.4.1.1.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.4.1.1.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin herhangi iki durumuna bağlı

simetrik olasılık, 2.3.1.1.4.1.2.1/4

toplam düzgün simetrik olasılık,
2.3.1.2.4.1.2.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.4.1.2.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin herhangi iki durumuna bağlı

simetrik olasılık, 2.3.1.1.4.1.3.1/4

toplam düzgün simetrik olasılık,
2.3.1.2.4.1.3.1/3

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.4.1.3.1/5-6

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu simetrisinin her
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.4.1.1.1/838

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız

simetrisinin her durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.4.1.2.1/838

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin her durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.4.1.3.1/838

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.5.1.1.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.5.1.1.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.1.1.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.5.1.2.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.5.1.2.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.1.2.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.5.1.3.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.5.1.3.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.1.3.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.5.2.1.1/6
toplam düzgün simetrik olasılık, 2.3.1.2.5.2.1.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.2.1.1/12

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.5.2.2.1/6

toplam düzgün simetrik olasılık, 2.3.1.2.5.2.2.1/3

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.2.2.1/12

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.5.2.3.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.5.2.3.1/4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.5.2.3.1/7-8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

simetrik olasılık, 2.3.1.1.8.1.1.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.8.1.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

simetrik olasılık, 2.3.1.1.8.1.2.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.8.1.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

simetrik olasılık, 2.3.1.1.8.1.3.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.8.1.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

simetrik olasılık, 2.3.1.1.8.2.1.1/12
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.8.2.1.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

simetrik olasılık, 2.3.1.1.8.2.2.1/12
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.8.2.2.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi iki durumunun bulunabileceği olaylara göre herhangi iki duruma bağlı

simetrik olasılık, 2.3.1.1.8.2.3.1/8
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.8.2.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.1.1.1/4-5
 toplam düzgün simetrik olasılık, 2.3.1.2.6.1.1.1/3-4
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.1.1.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.1.1.1/4-5
 toplam düzgün simetrik olasılık, 2.3.1.2.6.1.2.1/3-4
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.1.2.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.1.1/4-5
 toplam düzgün simetrik olasılık, 2.3.1.2.6.1.3.1/3-4
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.1.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.2.1.1/6
 toplam düzgün simetrik olasılık, 2.3.1.2.6.2.1.1/3-4
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.2.1.1/9

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu

bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.2.2.1/6
 toplam düzgün simetrik olasılık, 2.3.1.2.6.2.2.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.2.2.1/9

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.2.3.1/4-5
 toplam düzgün simetrik olasılık, 2.3.1.2.6.2.3.1/3-4
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.2.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.4.1.1/4-5
 toplam düzgün simetrik olasılık, 2.3.1.2.6.4.1.1/3-4
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.4.1.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.4.2.1/4-5
 toplam düzgün simetrik olasılık, 2.3.1.2.6.4.2.1/3-4
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.4.2.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.4.3.1/4-5
 toplam düzgün simetrik olasılık, 2.3.1.2.6.4.3.1/3-4
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.4.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.6.1.1/4-5
 toplam düzgün simetrik olasılık, 2.3.1.2.6.6.1.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.6.1.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.6.2.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.6.6.2.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.6.2.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.6.3.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.6.6.3.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.6.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.7.1.1/6
toplam düzgün simetrik olasılık, 2.3.1.2.6.7.1.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.7.1.1/9

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.7.2.1/6
toplam düzgün simetrik olasılık, 2.3.1.2.6.7.2.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.7.2.1/9

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.6.7.3.1/4-5
toplam düzgün simetrik olasılık, 2.3.1.2.6.7.3.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.6.7.3.1/6

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi bir ve son durumunun

bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.1.1.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.1.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

herhangi bir ve son duruma bağlı simetrik olasılık, 2.3.1.1.9.2.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

herhangi bir ve son duruma bağlı simetrik olasılık, 2.3.1.1.9.1.3.1/7-8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.1.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

herhangi bir ve son duruma bağlı simetrik olasılık, 2.3.1.1.9.2.1.1/12
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.2.1.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

herhangi bir ve son duruma bağlı simetrik olasılık, 2.3.1.1.9.2.2.1/12
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.2.2.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

herhangi bir ve son duruma bağlı simetrik olasılık, 2.3.1.1.9.2.3.1/8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.2.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre

herhangi bir ve son duruma bağlı simetrik olasılık, 2.3.1.1.9.2.3.1/8
toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.2.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.4.1.1/7-8
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.4.1.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.4.2.1/7-8
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.4.2.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.4.3.1/7-8
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.4.3.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.4.4.1/7-8
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.4.4.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.6.2.1/7-8
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.6.2.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.6.3.1/7-8
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.6.3.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.7.1.1/12

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.7.1.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.7.2.1/12
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.7.2.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrisinin ilk herhangi bir ve son durumunun bulunabileceği olaylara göre herhangi bir ve son duruma bağlı

simetrik olasılık, 2.3.1.1.9.7.3.1/8
 toplam düzgün olmayan simetrik olasılık, 2.3.1.3.9.7.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.1.1.1/5
 toplam düzgün simetrik olasılık, 2.3.1.2.7.1.1.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.1.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.1.2.1/5
 toplam düzgün simetrik olasılık, 2.3.1.2.7.1.2.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.1.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.1.3.1/5
 toplam düzgün simetrik olasılık, 2.3.1.2.7.1.3.1/3-4

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.7.1.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.2.1.1/7

toplam düzgün simetrik olasılık,
2.3.1.2.7.2.1.1/3-4

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.7.2.1.1/12

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumda
bağımsız simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.2.2.1/7

toplam düzgün simetrik olasılık,
2.3.1.2.7.2.2.1/3-4

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.7.2.2.1/12

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımlı durumda
bağımlı simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.2.3.1/5

toplam düzgün simetrik olasılık,
2.3.1.2.7.2.3.1/3-4

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.7.2.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumda
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.4.1.1/5

toplam düzgün simetrik olasılık,
2.3.1.2.7.4.1.1/3-4

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.7.4.1.1/8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumda
bağımsız simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.4.2.1/5

toplam düzgün simetrik olasılık,
2.3.1.2.7.4.2.1/3-4

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.7.4.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumda
bağımlı simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.4.3.1/5

toplam düzgün simetrik olasılık,
2.3.1.2.7.4.3.1/3-4

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.7.4.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumda
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre

simetrik olasılık, 2.3.1.1.7.6.1.1/5

toplam düzgün simetrik olasılık,
2.3.1.2.7.6.1.1/3-4

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.7.6.1.1/12

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumda
bağımsız simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.6.2.1/5

toplam düzgün simetrik olasılık,
2.3.1.2.7.6.2.1/3-4

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.7.6.2.1/8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumda
bağımlı simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.6.3.1/5

toplam düzgün simetrik olasılık,
2.3.1.2.7.6.3.1/3-4

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.7.6.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumda
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.7.1.1/7

toplam düzgün simetrik olasılık,
2.3.1.2.7.7.1.1/3-4

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.7.7.1.1/12

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumda
bağımsız simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.7.2.1/7

toplam düzgün simetrik olasılık,
2.3.1.2.7.7.2.1/3-4

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.7.7.2.1/12

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumda
bağımlı simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
simetrik olasılık, 2.3.1.1.7.7.3.1/5

toplam düzgün simetrik olasılık,
2.3.1.2.7.7.3.1/3-4

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.7.7.3.1/8

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu simetrisinin ilk
herhangi iki ve son durumunun
bulunabileceği olaylara göre herhangi bir
ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.1.1.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.1.1.1/13

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımsız
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.1.2.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.1.2.1/13

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı durumlu bağımlı
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.1.3.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.1.3.1/13

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.2.1.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.2.1.1/23

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
bağımsız simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.2.2.1/22

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.2.2.1/23

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
bağımlı simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.2.3.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.2.3.1/13

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.4.1.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.4.1.1/23

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
bağımsız simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.4.2.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.4.2.1/23

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumlu
bağımlı simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.4.3.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.4.3.1/23

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.10.6.1.1/12-13

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.10.6.1.1/23

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumlu
bağımsız simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi bir ve son durumuna bağlı

simetrik olasılık, 2.3.1.1.10.6.2.1/12-13

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.6.2.1/23

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı simetrik olasılık, 2.3.1.1.10.6.3.1/12-13

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.6.3.1/23

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı simetrik olasılık, 2.3.1.1.10.7.1.1/22

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.7.1.1/23

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı simetrik olasılık, 2.3.1.1.10.7.2.1/22

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.7.2.1/23

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımsız durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi bir ve son durumuna bağlı simetrik olasılık, 2.3.1.1.10.7.3.1/12-13

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.10.7.3.1/13

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı simetrik olasılık, 2.3.1.1.11.1.1.1/16

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.1.1.1/17

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı simetrik olasılık, 2.3.1.1.11.2.1.1/16

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.1.2.1/17

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı simetrik olasılık, 2.3.1.1.11.3.1.1/16

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.1.3.1/17

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı simetrik olasılık, 2.3.1.1.11.2.1.1/29

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.2.1.1/30

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımsız simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı simetrik olasılık, 2.3.1.1.11.2.2.1/29

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.2.2.1/30

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımsız-bağımlı durumlu bağımlı simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı simetrik olasılık, 2.3.1.1.11.2.3.1/16

toplam düzgün olmayan simetrik olasılık, 2.3.1.3.11.2.3.1/17

Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı-bir bağımsız durumlu simetrisinin ilk herhangi iki ve son durumunun bulunabileceği olaylara göre herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.4.1.1/16

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.4.1.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumda
bağımsız simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.4.2.1/16

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.4.2.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bir bağımsız durumda
bağımlı simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.4.3.1/16

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.4.3.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumda
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.6.1.1/16

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.6.1.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumda
bağımsız simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.6.2.1/16

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.6.2.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımlı-bağımsız durumda
bağımlı simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.6.3.1/16

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.6.3.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumda
simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.7.1.1/29

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.7.1.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumda
bağımsız simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.7.2.1/29

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.7.2.1/30

Bağımlı ve bir bağımsız olasılıklı farklı
dizilimsiz bağımsız-bağımsız durumda
bağımlı simetrisinin ilk herhangi iki ve son
durumunun bulunabileceği olaylara göre
herhangi iki ve son durumuna bağlı

simetrik olasılık,
2.3.1.1.11.7.3.1/16

toplam düzgün olmayan simetrik
olasılık, 2.3.1.3.11.7.3.1/17

VDOİHİ'de Olasılık ve İhtimal konularının tanım ve eşitlikleri verilmektedir. Ayrıca VDOİHİ'de olasılık ve ihtimalin uygulama alanlarına da yer verilmektedir. VDOİHİ konu anlatım ciltleri ve soru, problem ve ispat çözümlerinden oluşmaktadır. Bu cilt bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz olasılık dağılımlarında, simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılığın, tanım ve eşitliklerinden oluşmaktadır.

VDOİHİ Bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz bağımlı durumlu simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılık kitabında, bağımlı ve bir bağımsız olasılıklı farklı dizilimsiz dağılımlarda, simetrisinin ilk ve herhangi iki durumunun bulunabileceği olaylara göre toplam düzgün olmayan simetrik olasılığın, tanım ve eşitlikleri verilmektedir.

VDOİHİ'nin diğer ciltlerinde olduğu gibi bu ciltte de verilen ana eşitlikler, olasılık tablolarından elde edilen verilerle üretilmiştir. Diğer eşitlikler ise ana eşitliklerden teorik yöntemle üretilmiştir. Eşitlik ve tanımların üretilmesinde dış kaynak kullanılmamıştır.

GÜLDÜNKYA